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Government Assistance to Agriculture

in the U.S.A.

ARCUS CONSULTING LIMITED
VANCOUVER, CANADA

GOVERNMENT ASSISTANCE TO AGRICULTURE IN THE U.S.A: FEDERAL ASSISTANCE AND STATE ASSISTANCE IN THE THREE WEST COAST STATES

A Report

for the

Office of the Deputy Minister

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EXECUTIVE SUMMARY

This report presents the initial findings of a study of government assistance to agriculture in the three west coast states of the United States of America: California, Oregon, and Washington. Also included in the report are data for federal government assistance to agriculture in the U.S. in total and comparisons between the amounts of government assistance provided in the three states studied with government assistance to agriculture in Canada and, within Canada, in British Columbia.

This report is the second report deriving from a study of government assistance to agriculture in Canada, by province and in the three west coast states of the U.S.A., by state. The first report (Arcus Consulting Limited 1985) covered measures of government assistance to agriculture in Canada, by province. This second report covers government assistance to agriculture in the three west coast states of the U.S.A.

The types of programs of government assistance to agriculture included in the study are: cash payments to farmers and others in the agricultural sector, benefits accruing to farmers under programs of tax relief and tax exemption, and benefits arising from market regulation. Programs of both federal and state government assistance to agriculture in the three west coast states are included in the study.

The programs of government assistance to agriculture have been classified by source, federal or state government, into two major categories, two subcategories and into ten program type groups in accordance with the client's direction.

The major categories used in the classification are direct and indirect assistance. Direct assistance is assistance which impacts farmers' annual costs and/or returns directly. Examples of this type of assistance are stabilization payments and agricultural credit programs which reduce interest costs. Programs of indirect assistance are those programs which deliver benefits to agriculture indirectly, over a longer period of time than one year, and affect mainly the balance sheets of farmers rather than their annual operating statements. Examples are programs of agricultural research and extension and rural infrastructure development.

The sub-categories of programming used in the study are "revenue enhancing" and "cost reducing". These categories are used to described programs which improve farmers' revenues or reduce the costs of farming, respectively. (These categories are also known as "top-loading" and "bottom loading" respectively in discussions of federal and provincial programming in Canada.)

The program type categories used in this study are: product purchase/compensation, stabilization, market support and infrastructure, agricultural credit, tax benefits, other farm inputs, land and farm development, rural infrastructure, research and extension, and other.

Data for the value of the government assistance provided in these program categories in the three west coast states of the U.S.A. have been collected for annual periods approximating, as closely as possible, the Canadian government fiscal year April 1, 1982 through March 31, 1983. (Exact overlaps in the data periods could not be readily established as the three U.S. states and the U.S. federal government use different fiscal periods from those in use in Canada.) The data for all programs for which data was available at the time of the study is reported. These data are presented in the appendices to this report and are summarised and analysed in tables in the body of the report. Separate summaries are provided for federal and state programming, by state, and for all programming, by state.

The basic data obtained and reported in the appendices is all expressed in U.S. funds. For the tables in the body of the report and in the summary information provided below all U.S. dollar amounts have been converted to Canadian funds equivalent (at the average rate of exchange prevailing in the data period).

Interpretation of the data is limited by some qualifications in the data obtained and by some omissions of data for some programs. The major qualification in the data presented in this report is the fact that only about 50 percent of the federal assistance to agriculture in the U.S. is allocated to the states at source.

Within these constraints, the information and data obtained show total federal assistance to agriculture in the U.S.A. was about $41.4 billion (Canadian funds equivalent) in an annual data approximating the fiscal period April 1, 1982 through March 31, 1983. Of this amount, $578 million were allocated at source to the State of California; $120 million to Oregon; and $345 million to the State of Washington. At the same, time the amounts of state government assistance in each of these three states was: about $420 million in California, $73 million in Oregon, and $162 million in Washington.

The amounts of the total of the actually allocated federal and state assistance provided in each of the three states studied varied from a low of about $193 million in Oregon to a high of about $1.0 billion in California. Agriculture in the State of Washington received an estimated $507 million during the same annual period.

Three criteria are used to compare the amounts of government assistance provided to agriculture in the three states studied to the amount of government assistance provided in B.C. and in

Canada. These criteria are population, number of census farms, and gross value of farm production. Of the three criteria, the last, gross value of farm production, is considered to provide the most reasonable basis (of those considered in the study) for assessing the relative levels of assistance to agriculture between the the states and between the two countries.

Under this criterion, total federal assistance to agriculture in the U.S.A was 21 cents per dollar of gross value of farm production in the period studied. This amount was 50 percent higher than the equivalent measure of federal assistance to agriculture in Canada, 14 cents per dollar of gross value of farm production.

In the given circumstances, namely that only 50 percent of this federal assistance to agriculture is allocated to the states at source, the total allocated federal and state assistance to agriculture in the three states studied ranges from five cents per dollar of gross value of farm production in California to 12 cents per dollar of gross value of farm production in the State of Washington. The amount in Oregon is eight cents per dollar of gross value of farm production. These amounts compare to 26 cents in British Columbia and 24 cents nationally in Canada.

Under an assumption that the remaining 50 percent of federal assistance to agriculture in the U.S. can be allocated to the states on the basis of each states gross value of farm production, estimates of the fully allocated federal assistance can be obtained. These estimates, together with the estimates of state assistance to agriculture in the three states studied, give rise to estimates of the total of the fully allocated federal and state assistance to agriculture in the three states. These estimates, expressed in cents per dollar of gross value of farm production in each state, are: California, 16 cents; Oregon, 18 cents; and Washington 23 cents (all in Canadian funds equivalent). The values compare to 26 cents in B.C. and 24 cents in Canada.

Within the category of total federal assistance to agriculture at the national level in the U.S., programs of direct assistance constitute a clear majority. They provided about 92 percent of all the federal assistance provided to agriculture in the U.S. in the period studied. Further, within the category of direct federal assistance nationally, programs of a revenue enhancement dominate over cost reducing programs. Long term federal government assistance provided only about eight percent of U.S. federal programming in total in the period studied.

Within the three states studied, the fully allocated federal assistance to agriculture amounted to between 83 and 86 percent of all government assistance to agriculture identified in three states in this study. This is in contrast to the situation in B.C. and Canada where the equivalent percentages are 46 and 59 respectively.

Within the category of state assistance, the pattern is one of direct assistance dominating. In the three states studied, direct state assistance accounts for between 68 and 81 percent of all the state assistance provided in period studied. Within the category of immediate assistance, the pattern is one where cost reducing assistance (82 to 99 percent of the state immediate assistance identified, depending upon state) dominates in all three states. The situation in British Columbia is in direct contrast to this pattern of state assistance, as B.C. has 85 percent of its immediate assistance in the revenue enhancing category.

The findings are initial findings. Data is required some tax expenditures in two of the states studied and additional work is needed to better evaluate the amounts of federal government assistance provided agriculture under programs of water baisin development administered by the U.S. Department of the Interior, Bureau of Reclamation. As well, additional work is indicated in the area of the allocation of the approximately 50 percent of federal assistance to U.S. agriculture identified in this report as not being allocated to the states at source.

Details of all programs considered in this report, their costs (and the estimates of benefits created in the cases of programs not having direct costs to government) and all of the analysis made, are contained in the body of the report and its appendices to which readers are referred for further information.

Chapter 1

INTRODUCTION

This report presents the findings of the second part of a study of the government assistance to agriculture in Canada, by province and in three West Coast states of the U.S.A., by state. The study was requested by the Office of the Deputy Minister of Agriculture and Food for the Province of British Columbia and was undertaken by Arcus Consulting Limited of Vancouver, B.C.

This report is the second of three reports planned to derive from the study. The first report (Arcus Consulting Limited 1985) provided an initial estimate of the types and amount of government assistance to agriculture in Canada, by province. Both federal and provincial government programs of assistance in Canada were reported.

This second report covers the initial findings of the study in regard to government assistance to agriculture in the three west coast states of the U.S.A., by state.

A third report presenting the findings of a more comprehensive assessment of assistance to agriculture in Canada and the three west coast states of the U.S.A. is planned to follow these two reports and so to complete the study.

BACKGROUND

Governments in both Canada and the U.S.A. assist the agricultures of their respective countries.

In Canada, both the federal and provincial governments have jurisdiction over agriculture. Consequently, both levels of government have introduced programs of support and benefit to primary production agriculture over a long period of years. Currently, in Canada, attempts are being made to co-ordinate these programs more closely as fiscal restraint, at all levels of government, combined with requests for new programs, particularly tripartite agricultural stabilisation programs, compete for limited public funds. Existing programming in Canada is coming under closer scrutiny and the question of relative levels of support of agriculture in each of the provinces have been raised. It is in relation to these issues that this study was undertaken.

In the United States of America, similarly, both the federal and state, governments have jurisdiction over agriculture. However, in the U.S.A., the federal jurisdiction has, over time, come to have the dominant role in regard to programs of assistance to agriculture.

Canada is an importer of some U.S. agricultural products, mainly fruits and vegetables, while the U.S. and Canada are competitors in other markets, particularly food grain markets. It is in regard to the competition between the agricultural products of the two countries that consideration of U.S. government assistance to agriculture has been introduced into this study.

This report addresses the types and amounts of assistance provided to agriculture in the U.S.A. and to the three west coast states of the U.S.A. Comparisons of the levels of assistance in the U.S.A. and in the three west coast states relative to British Columbia and to Canada are provided.

OBJECTIVE OF THE STUDY

The objective of the study was to prepare a series of reports which record and compare and contrast programs of federal and provincial support of primary production agriculture in Canada, by province, and of federal and state support of primary production agriculture in the three west coast states of the United States and to provide these reports and their respective databases (on electronic spreadsheets) to the client.

The objective for this report was to complete an initial investigation of the types and amounts of government assistance provided to agriculture in the U.S. and the three west coast states of the U.S.A. (California, Oregon, and Washington) and to compare these estimates of assistance with similar estimates of government assistance to agriculture in British Columbia and in Canada derived and reported in the Canada report (Arcus Consulting Limited 1985.

REPORT

This second report covers the initial findings of the examination of government assistance to agriculture in the U.S.A. and to agriculture in the three west coast states of the U.S.A.

Chapter 2 presents an overview of the framework established for the analysis of the study. Chapter 3 compares and contrasts the agricultures in Canada and the U.S.A. and compares and contrasts the approaches of the governments in each country to assisting their agricultures. Chapter 4 presents measures of federal government assistance to agriculture in the U.S.A. in total and, separately, federal assistance to the agricultures in the three west coast states. Chapter 5 presents measures the state programs of assistance to agriculture in these three states. Chapter 6 presents estimates of the total assistance to agriculture in the U.S.A. and in the three west coast states of the U.S.A. It also provides analyses of these amounts of the total government assistance to agriculture in each of the three

states in terms of three measures of the economies in each state. The findings of the study are discussed in Chapter 7. Conculsions are drawn and are presented in Chapter 8. A bibliography and appendices complete the report.

In this second report, references to the "Canada report" are references to the report of government assistance to agriculture in Canada entitled: "Government Assistance to Agriculture in Canada, by Province" by Arcus Consulting Limited. B.C. Ministry of Agriculture and Food. Victoria, B.C. 1985.

Chapter 2

FRAMEWORK

Before the analysis of the nature and extent of government assistance to primary production agriculture in the two countries could be undertaken, a framework had first to be established within which the analysis could proceed. This framework was developed at the beginning of the study and is extensively reported in the Canada report. The essential details of this framework are repeated in this Chapter for the benefit of readers of this report.

DEFINITIONS AND PROGRAM CLASSIFICATIONS

In this study the following definitions are used.

A Farm: A Census Farm.

This definition of a farm was chosen because it is the lowest common denominator in the list of all definitions of a farm used in programs of assistance to farms and farmers in Canada and the U.S.A. Both federal and state/provincial programs use these and other definitions of a farm. However, given that almost every program of government assistance has its own unique definition of a farm, these individual program definitions lack the uniformity required for comparative purposes. Accordingly the definition of a census farm is used in this study to provided a common basis for "coast to coast" and international comparisons.

A Farmer: The operator of a census farm. One operator per census farm.

A Program of Government Assistance to Agriculture: In this study means a program of government assistance which provides a benefit to agriculture, its farms and/or its farmers. Programs of assistance may be programs of treasury expenditure: direct payments or grants to farmers; tax expenditures (the value of exemptions from payment of taxes); or program benefits created by regulation.

In the tables which summarize the programs of government assistance in this study, the programs have been divided into two major categories, two subcategories, and nine program type categories, in accordance with the client's instruction. The two major categories are: programs of direct benefit to farmers and programs of indirect benefit to farmers. The subcategories are revenue enhancing and cost reducing. The program type categories are: product purchase/compensation, stabilization, market support and infrastructure, agriculture credit, tax benefits,

other farm inputs programs, land and farm development programs, rural infrastructure, and research and extension.

PROGRAM CATEGORIES

Programs of Direct Benefit to Farmers: These programs are those which directly and immediately (annually) affect farmers' costs and returns. These programs generally affect a farmer's annual operating statement of income and expenditure in the year in which the program benefit is delivered. Examples are: annual commodity subsidies, annual interest rebates, annual farm input subsidies, annual farmland tax exemptions, and market regulation.

Programs of Indirect Benefit to Farmers: These are programs which only affect farmers' costs and returns indirectly and/or in the long run; i.e. programs which deliver benefits only over a period of several years. Examples are programs of land and farm development, agricultural research, agricultural extension services, and rural infrastructure development. Where these programs affect individual farmers, e.g. under a program of land drainage improvement inside the farm gate, the program is more likely to affect the farmer's balance sheet for any given year than to affect the operating statement.

In fact all programs of government assistance to farmers range over a continium of immediacy in their effect. The classification of programs into one or the other of the major categories identified above is generally obvious at the extremes of immediacy and long term effect. However, there may be programs near the middle of the continium which could be allocated to either category. In these cases, the classification presented represents the consultant's and client's joint interpretation of an appropriate classification for the purposes of this report.

Revenue Enhancing Programs: Programs are classified as revenue enhancing in this report if they add to the revenues which farmers receive from the sale of their products. These programs are also known as "top-loading" in Canada; i.e. they add program funds on top of market returns.

Cost Reducing Programs: A program is classified as cost reducing if, in effect, it reduces the costs incurred in farming. Some of these programs are also known as "bottom-loading" in Canada as they increase farmers' returns by taking out from the bottom of the annual statement of income and expenses some of the costs incurred in farming.

In making the classifications used in the study, a farm-gate point of view has been adopted. That is, when a program is viewed to determine whether is is revenue enhancing or cost reducing, long run or short run in its effect, the point of view

of the farmer is taken. Thus, for example, a subsidy to the railways for the transportation of grain is seen, from the farmer's point of view, as revenue enhancing and providing that revenue effect within one year while a grant for farm land development is regarded as a long run program.

The individual program categories used in this report are defined as follows.

Product Compensation: Programs which add directly to a farmers revenues by way of direct government purchase of product or by way of compensation for product lost (e.g. crop insurance for hail damage).

Stabilization: Programs whose primary purpose is to stabilise market returns for products whose prices vary from year to year.

Market Support and Infrastructure: Programs which contribute to higher returns to farmers through more efficient product marketing, cost savings in marketing and transportation or product processing.

Agricultural Credit: Programs which provide principal funding, generally at preferred interest rates, or interest rebates, to farmers.

Tax Benefits: Programs which provide a benefit to farmers, generally through an exemption, or partial exemption, from taxes normally paid by others.

Other Farm Inputs: Programs which affect farm inputs other than credit and tax benefits; e.g. fertilizer and pesticides.

Land and Farm Development: Programs which affect farming through the long term development of the land, buildings, and other internal infrastructure items on individual farms.

Rural Infrastructure: Programs affecting the rural infrastructure outside the farm gate; e.g. irrigation headworks and water distribution channels.

Research and Extension: Programs of agricultural research and agricultural extension.

Other Department of Agriculture Expenditures: A remainder category established to report state/provincial government assistance by way of Department of Agriculture expenditures in each state/province not otherwise identified and classified into one of the nine categories above.

GOVERNMENT EXPENDITURE VERSUS PROGRAM BENEFITS:

In this study the focus is on the government cash expenditure and tax expenditure (assistance) rather than program benefits in the first instance. That is, the data reflect the cost to government of the assistance provided rather than the benefit to farmers as recipients of the assistance.

This approach is taken for several reasons. First, most of the data available for direct payments to farmers is recorded and reported in this form by the suppliers of the assistance (the governments involved). Second, this approach deals directly with the problem of the current versus capital cost classifications of program assistance. All government assistance is current expenditure. Government expenditures can only be made if there is an appropriation in the Legislature, Congress, or Parliament for that year. On this basis it does not matter whether the expenditure is made for an annual benefit; e.g. a grain subsidy; or for a capital purchase, such as an irrigation development, which gives off a stream of benefits over a period of of several years.

Programs of government assistance created by regulation are an exception to this general rule primarily because these programs have little treasury cost and create (frequently large) benefits. In these cases, of necessity, the assistance provided is measured in terms of estimates of program benefits.

As well, the study includes estimates of the value of preferred interest rates for farm loans where these occur. The benefits deriving from these preferred rates of interest are not government expenditures per se but are a form of assistance to farmers and are included for this reason.

AGRICULTURAL CREDIT

Financial credit, at preferred rates of interest, is a major form of agricultural assistance provided by both the federal and provincial governments in Canada and by the federal government and some state governments in the U.S.A.. The obvious assistance is the amount of credit provided. The cost to government and the benefit to farmers of these programs are less obvious and have been established in this study in the following manner.

Interest Rate Reductions: Where interest rate reductions are provided in government programming, the value of the assistance has been established on an opportunity cost basis; i.e. on the basis of what the same credit would have cost the farmer from commercial (non-government) sources in the same time period (fiscal year) being considered. This estimate will include both the value of the assistance provided to farmers involved in the amount by which the government's cost of borrowing is below the

farmer's commercial cost of borrowing, and any further cost to government incurred in the event that the rate of interest established by the government for farmers is below the rate of interest incurred by the government in its borrowing of the funds required for the program.

To the extent possible the calculations of the value of the assistance involved in interest rate reductions have been made relative to the interest rate(s) applicable to commercial loan instruments of similar type and duration. For example, in Canada, the interest rate for the calculation of the value of the assistance involved in Farm Credit Corporation (FCC) first mortgage loans is compared to the interest rate charged by commercial lenders (banks) for the same type of first mortgage loan on farmland at the same time and for the same (or similar) duration. Similar calculations are made for U.S. programs.

Loan Guarantees: The value of the assistance to farmers under programs of government loan guarantee have been estimated on the basis of the actual loan loss experience in the fiscal period studied. These estimates may underestimate more recent experience.

Interest Reimbursment: The value of this assistance is taken to be the amount of the interest reimbursement payments made in the fiscal period.

TAX BENEFITS

Assistance to farmers by way of tax relief is common throughout Canada and the U.S.A.. The major categories of taxation under which farmers enjoy some tax relief or special consideration are: income tax, retail sales taxes, gasoline and fuel taxes, and property taxes. In this study, these tax concessions have been handled as follows.

Income Tax: A list of the income tax provisions affecting farmers Canadian farmers is contained in the Canada report. In Canada, there are special provisions for farmers for cash accounting, family farm roll-overs, accelerated capital cost allowances, amongst others. There are also general provisions for income splitting, and the treatment of capital gains. Similar provisions exist for U.S. farmers under the U.S. Income Tax Act.

Retail Sales, Gasoline and Fuel, and Property Taxation: Most provinces in Canada and some states in the U.S.A. have special provisions for farmers in the application of these categories of taxation. Exemptions from taxation and/or rebates of taxes collected are common forms of state/provincial government assistance to farmers. In these cases, estimates of the amount of the assistance is made by reference to the tax situation which would have prevailed in the absence of the assistance.

Of the three states examined in this study, all three provide a measure of assistance to farmers through property tax relief. Only California and Washington have a retail sales tax and there are provisions in both states for exemptions from these taxes for some items purchased by farmers. The same two states also have state fuel taxes and both states provide assistance to agriculture by relief from some or all of these fuel taxes. The State of Oregon does not have a state fuel tax but instead has a weight/mile tax from which farm vehicles are exempt.

THEORETICAL CONSIDERATIONS:

The major theoretical considerations related to the impact of programs of government assistance to agriculture are presented in the Canada report. The essence of these considerations is that farmer program benefits do not, generally speaking, equal government program expenditures.

The theoretical analysis presented in the Canada report shows that some programs of government assistance result in benefits to farmers and/or agriculture which are less than the amounts of government expenditure involved. This is true for programs of price support and for programs involving input and/or output subsidies. It is particularly true for programs of these types of assistance to farmers producing products for sale in domestic markets, but it is also true for farmers producing products for sale in international (export) markets.

In the case of these of programs some of the benefits of a government assistance to agriculture becomes shared with other participants in agricultural product or input markets. These other participants may be suppliers of farm inputs or participants in the marketing chain for a farm product. The latter include processors, transportation companies, wholesalers and retailers, as well as final consumers of the farm products.

As a consequence of these observations, it is apparent that a simple summation of the amounts of expenditure made by governments on programs of assistance to agriculture for any given period of time will lead to an overstatement of the benefits <u>to farmers</u> when programs of price support and production subsidies are involved. The exact amount of this overestimate will depend on the nature of the market for both the farmers' products and the market for the farm inputs which farmers use in order to produce that product, and the mix of government programs of assistance involved. The Canada report provides further detail.

MARKET REGULATION

In Canada there is extensive regulation of some agricultural product markets. Dairy, poultry and grain markets are considerably influenced by government regulations. Regional (provincial) and federal marketing regulations influence markets for manufacturing milk, eggs, live chickens, and live turkeys in Canada. Estimates of the effects of these regulations are included in the Canada report.

Generally speaking, the U.S. has fewer internal regulations affecting markets. Free interstate trade is a basic tenant of the U.S. Consititution. This tends to limit regulatory interventions which affect interstate trade. Nevertheless there is similar protection to that provided for dairy farmers and meat producers in Canada, in the U.S., under their federal dairy import and the meat import control laws.

TARIFFS

Both Canada and the U.S.A. maintain a set of customs tariffs on products imported into their respective countries. These tariffs are, in effect, a tax on imported products. Both farm inputs and farm outputs are affected.

The effects of customs tariffs are not included in this study for two reasons. First, they affect all farmers equally; there is no interprovincial (interstate) distinction in the customs tariff. Thus, for a study which seeks to assess the relative amounts government assistance in each province (state), this information in not crucial.

Secondly, the assessment of effects of tariffs requires the measurement of effective rates of protection, rather than nominal rates of protection created by the tariffs extant and these measurements of effective protection for Canadian agriculture are presently lacking.

DATA PERIODS:

The basic data period for the study was the Canadian government (federal and provincial) fiscal period April 1, 1982 through March 31, 1983. This period was chosen because it is a Canadian government fiscal period which provided a uniform and consistent basis for reviews of Canadian federal and provincial government expenditures in a period for which the data were, at the time of the Canada report, substantially complete.

Different fiscal periods are in use in the U.S.A. These are discussed further in the following chapter.

SEPARATION OF COMPONENT COSTS

Some programs of assistance to farmers are jointly funded. In some cases several parties contribute to the costs of programs (e.g. the Canadian programs: ARDA, crop insurance, farm income insurance (assurance) and western grain stabilization involve federal, provincial and farmer participation. Similarly, in the U.S., many state marketing programs, and some extension programs are funded from several sources. In these cases, an attempt has been made to establish the net amount of the government assistance, by level of government involved, by removing from the total program costs, the amount of the farmer contributions and by separating the government assistance according to source (federal, provincial or state).

NET EXPENDITURES

In the same way as an attempt has been made to separate program component costs, so too has an attempt been made to express government program expenditures on a net basis. Accordingly, where revenues and/or recoveries can be, or have been, identified as part of a program and where the amount of these revenues and/or recoveries can be established, the measures of program assistance reported are on a net basis accordingly.

PROGRAMS INCLUDED

In this study the following programs of government assistance to agriculture have been included.

In Canada: Federal Programs: All programs of government assistance identified in a federal study of federal agri-food expenditures by Huot (1985) have been included in this study with the following exceptions: programs of federal expenditure on Race Track Supervision, Federated Women's Institutes, the International Development Research Centre, and on the Food Hazards and Quality Program. As well, federal government cash grants to FAO, the Mennonite Central Committee and the World Food Program, included in the Huot study, have been omitted from this study. The programs in these areas have been ommitted from this study on the grounds that they relate to special interest groups and/or consumers in general as is the case in respect of the Food Quality and Hazards program.

At the provincial level in Canada, all programs identified either by the B.C. Ministry of Agriculture and Food, or by the Ontario Ministry of Agriculture in a study of agricultural assistance (OMAF 1984), or or by the Consultant as being of assistance to agriculture in a province have been included.

In the U.S.A.: All programs of government assistance identified by the B.C. Ministry of Agriculture or the Consultant have been included.

BASIS FOR COMPARISON

The question of the bases for comparisons of government assistance to agriculture between provinces in Canada and between Canada and the U.S.A. and between provinces and states has been resolved as follows.

Three bases of comparison have been adopted. These are: population, number of census farms, and the gross value of farm production.

Comparisons of government assistance to farmers based on the population indicate the relative level support of agriculture in a country, province or state as a whole.

Comparisons using the number of census farms allows consideration of the relative level of benefits to farmers in each country, state or province.

Comparisons based on the gross value of farm production in a country, province or state measures the assistance provided relative to the amount of agricultural production (measured in dollars) in each state/province.

AGGREGATE ANALYSIS

This study is intended to be a macro-economic analysis of government programs by province and state. It was not intended that any commodity by commodity analysis be undertaken other than that which occurs incidentally through the inclusion of commodity specific programs in this study.

Similarly the study does not distinguish between the effects of programs on small farms and commercial farms. All farms are census farms within the study and no distinction is drawn between those farms which are of commercial size and those which are only capable of providing modest amounts of income to the owners.

DATA PROCESSING

Wherever possible the data has been processed electronically. Electronic spreadsheets containing the program assistance information and data have been prepared and copies of these spreadsheets, on electronic data disks, have been provided to the client. The spreadsheets have been assembled using the software program Lotus 123.

ROUNDING IN THE REPORTED DATA

All the analysis in this report has been done using a microcomputer. The use of a computer results in more significant digits of numeric information being carried in sequential calculations than it is usually useful to report in the tables. It is therefore possible to observe, in the information reported in the tables, minor variations in the data due to rounding.

Chapter 3

AGRICULTURE IN CANADA AND THE USA

In this chapter, some of the similarities and differences between the agricultures of Canada, the U.S.A. and the three west coast states of the U.S.A. are identified and contrasted. Against this background, differences and similarities in government assistance to agriculture in the two countries are noted.

AGRICULTURE IN CANADA AND THE USA

Agriculture in Canada exhibits considerable diversity. This results from the geography of the country, its historical development, past policies, markets, and a host of other factors. In Canada, grain production is concentrated in the prairies, fruit production in B.C., Ontario, Quebec and Nova Scotia, dairy production in Ontario and Quebec and livestock in Alberta, Ontario and Quebec.

Agriculture in the U.S.A. is similarly diverse. The mid-west is the grain and livestock area of the country while fruit and vegetable production occurs mainly in the south-west. Dairy production tends to be concentrated in the upper states of Minnesota, Wisconsin and New York. Cotton is mainly grown in the southern states.

The study being reported here addresses only part of the U.S.A.'s agriculture; that in the three west coast states. The diversity observed in these states is largely north to south, whereas that observed in Canada is east to west. Geographic latitude is important to some of the differences noted below.

The scale and diversity of Canadian agriculture is covered extensively in the Canada report. In this report, data for the Province of British Columbia and for Canada are included for comparative purposes.

Table 3.1 presents summary data on the economies of the U.S., the three U.S. west coast states of the U.S. and for British Columbia and Canada for the year 1982. The data presented in this table shows that the population of the U.S. was approximately 9.4 times that of Canada in 1982. British Columbia was similar in size, population-wise, to Oregon. California had about 10 percent of the U.S. population at that time and was approximately equal in size (of population) to Canada.

The gross national products of the two countries were about three billion and 0.3 billion respectively in that year. Thus, the U.S. GNP was about 10 times that of Canada's at that time.

TABLE 3.1: CHARACTERISTICS OF SELECTED CANADIAN AND U.S. ECONOMIES. 1982.

		U.S.A.			CANADA	
Item	Unit	Total	Calif.	Oregon	Wash.	B.C.	Canada
Population (1, 2)	000's	231,786	24,697	2,668	4,276	2,790	24,563
% U.S.		100.0%	10.7%	1.2%	1.8%	1.2%	10.6%
% Canada		943.6%	100.5%	10.9%	17.4%	11.4%	100.0%
Gross National			CAN $				
(Domestic) Product (3,4)	$ B	3,775	n.a.	n.a.	n.a.	45	369
% U.S.		100.0%				1.2%	9.8%
% Canada		1023.1%				12.1%	100.0%
Farm (5,6)							
Realized Gross Income	$ M	201,729	18,897	2,614	4,253	964	19,283
Value of Inventory Change	$ M	(2,278)	(461)	(60)	(19)	(9)	89
Gross Value of Production	$ M	199,451	18,436	2,554	4,234	956	19,372
% U.S.		100%	9%	1%	2%	0%	10%
% Canada		1030%	95%	13%	22%	5%	100%
Op. Expenses & Depc'n	$ M	172,327	14,735	2,156	3,172	813	15,590
Net Value of Production	$ M	27,124	3,702	398	1,062	143	3,782
% U.S.		100%	14%	1%	4%	1%	14%
% Canada		717%	98%	11%	28%	4%	100%

1 U.S. Dept. of Commerce. Bureau of the Census. Stat. Abstr. of the U.S.A. 1985. P.11. Table 11: Resident Population: States. July 1 estimate.
2 Statistics Canada. Cat. 91-201. Nov 83. p.13
3 USDA. ERS. Agricultural Outlook. April 1985. p. 47
4 Statistics Canada. Cat. 13-213. 1985.
5 USDA. ERS. Economic Indicators of the Farm Sector. State Income and Balance Sheet Statistics 1982. Washington, D.C. Pub. No. ECIFS 2-4. Jan. 1984. Table 5: Gross Income and Net Income from Farming (incl. CCC loans and Farm households), by State, 1955-1982.
6 Statistics Canada. Net Farm Income. Cat. 21-201. 1982.. t-1. P. 28.
7 USDC. BOC. Stat. Abstr. of the US. p. 439. Table 730. Personal Income in Current Dollars.
Exchange Rate $US 1.00 = $1.23 Canadian.

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The statistics for farm incomes have a similar pattern to them. The total U.S. realised gross value of farm production is about ten times Canada's and the net value of U.S. farm production is about seven times Canada's. California's agriculture produces almost as much value (gross and net) as does Canada.

Table 3.2 provides some detail on the types and amounts of agricultural production in the U.S. and the three states studied. These data are compared to data for B.C. and Canada for the same items in the same time period in the table.

There were 2,240 thousand census farms in the U.S. in 1982. This number compares with 318 thousand census farms in Canada the year before, 1981. The area in census farms was 399.4 million hectares in the U.S. and 30.9 million in Canada.

Grain production was larger in relation to the area in farms in Canada: 46.4 million tonnes in Canada relative to the U.S.'s 312.2 million tonnes. However the reverse situation is observed in oilseeds: 3.7 million tonnes in Canada to 68.2 million in the U.S. The number of beef cows in the U.S. in 1982 was approximately ten times the number in Canada in 1981. Milk cow numbers were 10.9 and 1.8 million respectively. Canada has relatively more milk cows than the U.S.

In terms of the value of production, beef appears to be the largest product in the USA. This contrasts with Canada where grain had the largest value of all crops grown in 1982. Dairy and hog production in Canada were relatively larger than in the USA. California produced over half the value of fruits in the U.S. in 1982 and over 40 percent of the vegetables. Both categories of production were considerably in excess of Canadian output in the same two categories in terms of value.

DIFFERENCES IN PROGRAMMING APPROACHES

The programming of government assistance to agriculture in Canada is approximately 60 percent federal, 40 percent provincial in Canada in terms of dollar amounts of assistance (Arcus Consulting Limited 1985). This observation reflects the fact that, in Canada, both the federal and provincial governments have jurisdiction over agriculture and that both levels of government choose to provide some measure of assistance to the agricultures in each province.

The situation in the U.S.A. is different. Again both the federal and state governments have jursidiction over agriculture but, in the west coast states at least, the level of state assistance is modest. Most of the state direct assistance is of a regulatory nature involving production and product inspections. There are small amounts of assistance provided to agriculture by the states in the area of market development as well.

TABLE 3.2: CHARACTERISTICS OF AGRICULTURE IN THE WEST COAST STATES. 1982.

	Unit	U.S.A.	California	Oregon	Wash.	B.C.	Canada
Census Farms (1,2)	No.	2,240,976	82,463	34,087	36,080	20,012	318,361
Area in Farms (1,2)	000's Ha					568	30,966
	000's ac.	986,797	32,157	17,740	16,470		
	% U.S.	100.0%	3.3%	1.8%	1.7%	0.1%	7.8%
Grain Production (3,4)	000 tonnes	312,256	5,704	2,325	5,493	375	46,358
	% U.S.	100.0%	1.8%	0.7%	1.8%	0.1%	14.8%
Oilseed Production (3,4)	000 tonnes	68,156	1,162	0	0	57	3,718
	% U.S.	100.0%	1.7%	0.0%	0.0%	0.1%	5.5%
Beef Cows (5,6)	000's	34,203	952	656	618	230	3,418
	% U.S.	100.0%	2.8%	1.9%	1.8%	0.7%	10.0%
Milk Cows (5,6)	000'	10,850	946	99	210	91	1,765
	% U.S.	100.0%	8.7%	0.9%	1.9%	0.8%	16.3%
Poultry Meat (7,8)	tonnes	9,113	546	40	43	51	527
	% U.S.	100.0%	6.0%	0.4%	0.5%	0.6%	5.8%
Egg Layers (7,8)	000's	310,515	39,456	2,853	5,749	2,828	24,255
	% U.S.	100.0%	12.7%	0.9%	1.9%	0.9%	7.8%
Hogs. Inventory (9,9a)	000's	55366	185	105	74	260	9,910
	% U.S.	100.0%	0.3%	0.2%	0.1%	0.5%	17.9%
Horticultural Production							
Commercial Tree Fruits (3,10)	000 tonnes	119,703	112,208	301	4,211	231	566
	% U.S.	100.0%	93.7%	0.3%	3.5%	0.2%	0.5%
Berries (3,10)	000 tonnes	531	284	29	12	31	77
	% U.S.	100.0%	53.5%	5.5%	2.3%	5.8%	14.4%
Vegetable Production (3,10)	000 tonnes	19,473	10,403	835	728	198	1,912
	% U.S.	100.0%	53.4%	4.3%	3.7%	1.0%	9.8%

(Cont ...)

TABLE 3.2: CHARACTERISTICS OF AGRICULTURE IN THE WEST COAST STATES. 1982. (continued)

	Unit	U.S.A.	California	Oregon	Wash.	B.C.	Canada
Farm Value of Production of:	$ M				$CAN		
Grains (15,12)		31,404	678	66	839	36	5,066
	% U.S.	100.0%	2.2%	0.2%	2.7%	0.1%	16.1%
Oilseeds (15,12)		12,433	289	279	0	9	1,209
	% U.S.	100.0%	2.3%	2.2%	0.0%	0.1%	9.7%
Beef (Cattle and Calves) (5,12)		38,916	299	485	729	128	3,501
	% U.S.	100.0%	0.8%	1.2%	1.9%	0.3%	9.0%
Hogs (9,12)		12,138	36	22	15	52	1,953
	% U.S.	100.0%	0.3%	0.2%	0.1%	0.4%	16.1%
Dairy Products (5,12)		20,074	134	207	485	217	2,556
	% U.S.	100.0%	0.7%	1.0%	2.4%	1.1%	12.7%
Poultry and Eggs (7,12)		12,050	1,039	74	109	136	1,236
	% U.S.	100.0%	8.6%	0.6%	0.9%	1.1%	10.3%
Fruits (incl berries,grapes & nuts)(15,11		7,053	3,619	160	578	106	275
	% U.S.	100.0%	51.3%	2.3%	8.2%	1.5%	3.9%
Vegetables (incl. potatoes) (15,11)		5,012	2,193	124	129	84	688
	% U.S.	100.0%	43.8%	2.5%	2.6%	1.7%	13.7%

Sources continued overleaf...

1 USDC. BOC. 1982 Census of Agriculture. Vol 1. Pt. 51. Summary and State Data.
Table 1. P.134. Farms, Land in Farms and Land Use. 1982.
2 Census of Canada. 1981. Agriculture. Canada. Table 12.
3 Appendix A. Table A.1
4 Statistics Canada. Cat. 22-002. Vol 63. No.8.
5 USDC. BOC. 1982 Census of Ag. Vol 1. Pt 51 Table 11. Pp. 218-225.
Cattle and Calves. Inventory and Sales.
6 Statistics Canada. Livestock and Animal Products. Cat. 22-203. 1982.
7 USDC. BOC. 1982 Census of Agriculture. Vol 1. Pt. 51. Summary and State Data.
Table 14. Pp. 243-238. Poultry Inventory and Sales. Hens and Pullets of Laying Age.
8 Statistics Canada. Production of Poultry and Eggs. Cat. 23-203. 1982.
9 USDC. BOC. 1982 Census of Agriculture. Vol 1. Pt. 51. Summary and State Data.
Table 12. Pp. 232-249. Hogs and Pigs. Inventory (Dec. 31) and Litters & Sales 1982.
9a Statistics Canada. Livestock on Farms. Cat. 23-203. Table 18. Canada is sum of Ten provinces.
10 Statistics Canada. Fruit and Vegetable Production. Cat. 22-003. Jan. 1985.
11 Statistics Canada. Farm Net Income. Cat. 21-201 T.2-11
12 Statistics Canada. Farm Cash Receipts. Cat. 22-001 Farm Value of Production.
13 BCMAF. Production of Berry Crops, Grapes and Filberts Together with an Estimate of Farm Value. 1982. and
14 BCMAF. Production of Tree Fruits Together with an Estimate of Farm Value. 1982. and
15 USDC. BOC. 1982 Census of Agriculture. Vol 1. Pt. 51. Summary and State Data.
16 Table 16. Farms w Sales of $10,000 or More 1982. Grains incl. SB minus SB.

In the U.S.A., the federal government is the main supplier of commodity price and stabilization support funds. It is also the major provider of infrastructure funds, but not generally through the U.S. Department of Agriculture. The U.S.Department of the Interior, Bureau of Reclamation is a major source of funds for water projects which, inter alia, provide water for agricultural uses, particularly irrigation water. This is in contrast to the Canadian situation where irrigation and agricultural water supplies have been addressed by the federal and provincial governments through their respective departments of agriculture using the ARDA and PFRA programs.

In Canada agricultural research is funded largely by the federal government. Extension is funded by the provinces. In the U.S.A., both research and extension are jointly funded; i.e. funds for both activities come from both federal and state sources. These activities also enjoy some local body (county) funding in some states. Further, the state funding of extension and research is not usually routed through the state department of agriculture. Instead, these funds flow through the state departments of education or higher education to the land grant universities. There, the research funding is delivered to, and through, the agricultural experiment station. The extension funds are delivered through the co-operative extension service which is also headquartered at the land grant university.

In the U.S., counties and cities are involved in government assistance to agriculture in some states. Of relavence to this study, at his level of government, is the situation in California where the (State) Land Conservation Act, which allows farmers to dedicate their land exclusively to agricultural uses and thereafter be assessed for property tax purposes on the land's agricultural productivity value, operates at the county level. Similarly, in the State of Washington, in King County (which includes the City of Seattle), there are special provisions regarding for property taxes on agricultural land.

This study includes data for the compensation provided to the counties of California, by the State of California, for the effects on county property tax revenues of the operation of the (State) Land Conservation Act. However, data for the King County, Washington situation was not readily available. In a more comprehensive analysis of government assistance to agriculture in these three states of the U.S.A., the assistance provided agriculture at the county/municipal level in the three states studied should be more fully examined.

FUNCTIONS OF STATE DEPARTMENTS OF AGRICULTURE

The state departments of agriculture in the three states studied are generally regarded, there, as agents of the public whose

responsibilities are public health and safety in food production and marketing. As such they are not generally seen as agents of support of farmers or food production. Some examples may give the flavour of this difference.

In the California Governor's Budget 1984-85, there were eight major categories of government activity. Notwithstanding the fact that that state's agriculture produces more gross revenues than the agriculture of any other state in the union (U.S.D.A., E.R.S. 1984, Table 1), agriculture is not one of the eight categories. In fact, the budget of the Department of Food and Agriculture is found incidentally in the last of the eight categories in the Governor's Budget, General Government, under the heading "Regulatory" together with the Board of Chiropractic Examiners, the California Horse Racing Commission and the Public Utilities Commission, among others.

From the Oregon Department of Agriculture: "As you know, in government budgeting and accounting there are many sources of funds, but only the General Fund could be considered as the "assistance" you refer to. For example in our Milk Market Stabilization Program, that you mention, it is funded 100% by the dairy industry. These funds are called "other funds" in government. In no sense can we call that "assistance". Our agency is 34% General Fund. But only a very small portion can be considered "assistance" to farmers - either direct or indirect. Let me give you a for instance. The Plant Pest and Disease control program benefits all segments of our society and incidentally our farmers also as they are part of that society. Protecting our environment can hardly be considered assistance to one segment of our population. In fact the philosophy in budgeting in Oregon leans very heavy on user fees or license fees when at all possible." (Oregon Department of Agriculture, 1984).

WATER

Water for agricultural uses is a resource which is handled differently in the U.S.A. from the way it is handled in Canada. In the U.S., water is water and tends to be addressed by the Bureau of Reclamation federally and by state departments of natural resources, or water, at the state level. In California and Oregon, water programs are found in the State Departments of Water Resources. In Washington State, water programs are located in the State Department of Ecology.

One consequence of this difference in approach to water in the U.S. is that the costs of agricultural water supplies are not as visible as in Canada. The Bureau of Reclamation, for example, often deals with water on a multiple use basis. A water basin development project may, for example, have a hydro electric component, a recreation component, a fish and wildlife component, and agricultural irrigation water component and a municipal and

industrial water component. Consequently, the Bureau tends to think and analyse its work on project lines rather than on a use basis. Further, under Bureau guidelines, there may be interactions between the hydro power development in a project and the irrigation development in cases where a hydroelectic development supplies electricity for irrigation pumps in another part of the same water basin project.

Further, water projects funded by the Bureau of Reclamation are fully cash costed; i.e. the amount of their total cash costs are established and records of these costs are kept on a project by project basis. All cash project costs are allocated to users for recovery. As well, some imputed costs are also allocated, but the allocation of these costs depends on the use being made of project facilities. It is intended that the allocated costs be recovered from users. Thus, irrigators are charged for water they use. The charges made for water used by irrigators include both a current and a capital cost component. However, the capital cost component is not included until the project has been operational for ten years. Further, for irrigators, the allocated costs do not include any interest on investment during the construction period and no interest is charged irrigators on the principal amount of their allocated interest in the project outstanding.

Further, the irrigators repayments are adjusted to an "ability-to-pay basis". Thus, if the Bureau determines that the irrigators' ability to pay is less than the amount of the charges required for full cost (as defined above) recovery, then the lower of the two charges is the one which is adopted. The costs allocated to, but unpaid by, irrigators in this circumstance is transfered to other project users (usually hydroelectic power users).

On the earlier water projects of the Bureau, pre-1950's, the irrigators' ability to pay was generally sufficient for full recovery of the costs allocated to irrigators. However, in more recent projects the share of costs allocated to irrigators being repayed by irrigators has fallen below 100 percent, considerably below in some cases (U.S. Department of the Interior, Bureau of Reclamation 1985). In these cases there is an element of cross-subsidisation by other project users contained in the cost recovery program.

The major element of government assistance to agriculture in the area of water developments in the U.S. identified in this study is the exemption of irrigators from the payment of interest on their share of capital costs of water development projects. Estimates of the amount of this subsidy from the federal treasury are included in the data of the analysis which follows.

Below, some specific points of interest and contrast in government assistance to agriculture in each of the three states studied are presented.

CALIFORNIA

California supports its agriculture through programs delivered through the Department of Agriculture and Food. These programs, and the amounts of assistance provided by them, are listed in Appendix C, Table C.1. However, the total dollar amounts of the programs listed are said to overestimate the actual net cost to government of the programs delivered (California Department of Food and Agriculture 1985) as revenues from user fees, recoveries etc. go into the state general fund, and consequently are not directly attributed to the programs which they support.

California also supports agriculture through the provisions of the California Land Conservation Act 1965. Under this act, counties, cities and municipalities may enter into contracts with owners of agricultural land under which the land included in the contract becomes exempt from taxation upon its highest and best use value and instead becomes taxable on its agricultural productivity value. The contract runs for a perpetual 10 year period. The penalty for breaking it is a fee of 12 percent of the assessed value upon contract cessation.

Because this program is implemented at the county/municipal level, the value of the tax savings accruing to farmers are disbursed throughout the municipalities and counties participating in the program. As a consequence, there are no readily available estimates of the total amount of this assistance to agriculture. However, the counties and minicipalities are partially compensated for the revenues foregone by the State. An estimate of the amount of this compensation is included in the data provided in this report.

Water resources in California come under the California Department of Water Resources. Thus, the agricultural water programs which in Canada are delivered to agriculture through ARDA programs, in California are administered, together with all other water resource programs, on a project basis, in the California Department of Water Resources. This difference in administration makes identification of the agricultural water supply costs and returns difficult. However, we are advised that, at the state level, water projects are subject to full cost recovery and that agriculture, under this accounting proceedure, would pay its full pro-rata cost of the project on a water-used basis (ibid.). Discussions with officials in the California Department of Water Resources confirmed this absence of major programs of subsidy or grants to agricultural water users by the State in the State of California (California Department of Water Resources 1985).

There are no exemptions from California state retail and use taxes, state corporation taxes, state personal income taxes, or state fuel taxes (California Department of Food and Agriculture 1985 and California Department of Finance 1985).

OREGON

The State of Oregon provides assistance to agriculture through the Departments of Agriculture, Higher Education, Revenue, Water Resources and Veterans' Affairs.

The Oregon Department of Agriculture is part of the Executive arm of government in the State of Oregon. It is identified as a unit of government Economic Development and Consumer Service (Oregon Blue Book). "It provides service, leadership and regulatory functions for the (agricultural) industry." (Ibid. p. 28). The major activities of the Department are: agricultural development and marketing, animal health, commodity inspection, food and dairy inspection, livestock services, plant services, laboratory services, milk stabilization, soil and water conservation, and weights and measures. The Department also provides authority for 22 commodity commissions. "Most commissions conduct promotional, research, educational and marketing projects." (ibid. p.29) although the funding of these commissions is entirely from industry sources.

WASHINGTON

In Washington State, about 70 percent of the funds disbursed by the Department of Agriculture are not taxpayer funds. They are producer funds, called "dedicated funds" in the Department, collected from producers of particular agricultural commodities. These funds are used to support product inspections, seed certifications, research and market development. The net direct state taxpayer contribution to agricultural assistance in this state is accordingly small, only about 30 percent of the Department budget by recent estimate (Washington State Department of Agriculture 1985).

RECOVERIES

In all three of the states studied many of the services provided by the Department of Agriculture are actually on a fee for service basis; i.e. fees are charged for the service provided. However, there are differences between the states studied in the manner in which these fees are collected and reported. In California, all fees go into the general fund. Thus, in that state the expenses reported by the Department of Food and Agriculture are gross expenses.

In Oregon, funding is by program. Each program has, potentially, three sources of funds: state, other, and federal funds. Other funds are funds deriving from license fees, levies, marketing charges, etc. as noted under "Functions of State Departments of Agriculture" and "Oregon" above. Thus, in this state, it is generally possible to identify the net cost of program funding to the State.

In Washington, the situation is similar to that in Oregon. The same three potential sources of funds exists, and, as noted under "Washington" above, other funds, known as dedicated funds in that state, provide for about 70 percent of current State Department of Agriculture expenditures. As in Oregon then, the Washington State program expenditure data is expressed on a net basis.

CENSUS FARMS

A Census Farm has a different definition in the U.S. from Canada.

A Census Farm in the Canada 1981 Census of Agriculture was defined as "a farm, ranch or other agricultural holding with sales of agricultural products during the last 12 months of $250 or more". Operations which anticipated sales of $250 or more in 1981 were also included (Statistics Canada 1982A).

A census farm in the United States in 1982 was defined as "any place from which $1,000 or more of agricultural products were sold or normally would have been sold during the census year" (U.S. Department of Commerce 1984A. p. V.).

These definitions are similar in general nature but different in the basic value of produce which must be sold in order to be classified as a census farm. Further the currency exchange rate difference between Canada and the U.S.A. means that the qualifying levels were further apart than at first it may appear. With the exchange rate at about 1.25 Canadian dollars per U.S. dollar (of which see more below), the Canadian threshold value is the equivalent of $US 200. Conversely, the U.S. threshold is the equivalent of about $CAN 1,250.

Without a special run of all the 1981 Canadian census data to select for those farms in Canada with over $CAN 1,250 in sales, it is not possible to determine the extent of the difference in farm number deriving from this difference in threshold values. However, some data from a special run on the B.C. census information undertaken for the B.C. Ministry of Agriculture and Food, shows that, with the threshold set at $CAN 1,600 approximately 20 percent of the 1981 Census of Canada farms in British Columbia would be excluded (BCMAF 1985). This information suggests that, if the threshold were set at $CAN 1,250, the number of Canadian census farms in B.C. might be about 15 percent fewer.

Thus, the analysis which uses the number of U.S. Census farms as a basis for analysis and comparison will generate higher values in the "per census farm" information than the Canadian analysis of the same type of information.

DATA PERIODS

The fiscal periods for U.S. government programs of assistance to agriculture do not match the Canadian governments' fiscal period and some U.S. federal government agency fiscal periods differ from the Canadian government fiscal period as well.

The U.S. federal government's fiscal period begins October 1st. and ends September 30th. This period is almost exactly six months offset from the Canadian governments' fiscal period. The degree of overlap between the U.S. and Canadian government fiscal periods therefore provides no useful criterion for choosing a U.S. fiscal period for this study.

The period October 1st. 1982 through September 30th. 1983 has been chosen for use in this study on the grounds that this fiscal period includes program cost data for crops grown in the calendar year 1982 and sold in this fiscal period. The use of data from this fiscal period for U.S. federal programs relative to data for the Canadian fiscal period will result in the data for agricultural production programs (under which payments are made between April 1st. and September 30th.) being different between the two countries in any comparisons made. In the Canadian data, production data in the calandar year 1982 will be covered. In the U.S., government costs in the fiscal period chosen will relate to production in the calendar year 1983. To the extent that production in the two years in each country was similar this will not be a problem. However, if production of any given crop varied between these two years, in either country, some of the variation in program costs observed between the two countries may derive from this difference in data period.

The major U.S. federal programs of agricultural assistance make payments for harvested crops (particularly wheat and feed grains). Therefore, payments for crops harvested in the fall of 1982 will be included in the data periods chosen for both countries. These program expenses will be properly comparable.

One of the major U.S. federal agencies, the USDA Agricultural Stabilization and Conservation Service (ASCS), uses a calendar year for its record period. For programs administered by this agency, the data period is calendar 1982 as this period most closely overlaps the Canadian fiscal period.

The fiscal period in the three west coast states of the U.S.A. is July 1st. through June 30th. each year. For this study, the

states' fiscal period July 1, 1982 through June 30, 1983 has the greatest overlap with the Canadian fiscal period used and has, for this reason, been used in this study.

All programs of U.S. state or federal government expenditures for assistance to agriculture are reported relative to these fiscal periods.

An attempt has been made in all cases to align the data period used as closely as possible with the Canadian fiscal period adopted for the study.

CURRENCY EXCHANGE

All the financial information referred to in this report was originally expressed in the currency of the country involved. For some comparisons, such as those which compare government assistance to agriculture between the two countries in terms of assistance per dollar of gross value of farm production, the difference in currency values does not matter since the parameter used is effectively a percentage. However, when the value of production itself is being compared, data in a single currency is needed. In these cases, the data reported in the appendices in U.S. funds has been converted to Canadian funds for presentation in the summary tables contained in the body of the report.

The rate of currency exchange has been taken to be that of the average daily noon exchange rate in the calendar year 1982. This time period was chosen as it was the year to which most of the production data applies. As well, as it happened, the average daily noon currency exchange rate during 1983 had a very similar value (the same value when rounded to two decimal places) as in 1982. Thus, this rate of exchange was broadly applicable in both calendar years.

The average daily noon currency exchange rate in 1982 was $US 1.00 equals $CAN 1.2341 (Bank of Canada 1984). For convenience this value has been rounded to 1.23 for the calculations of the analysis which follows.

All financial data in the tables in the body of this report (Chapters 3 through 8) are in Canadian funds equivalent.

Chapter 4

FEDERAL ASSISTANCE

In this chapter, the findings of the analysis of federal assistance to agriculture in the U.S. and the three west coast states of the U.S.A. are presented. The data are summarised in Table 4.1 and are analysed in this table and in Table 4.2. Detailed information for all programs appears in Appendix B, in Table B.1. The data in Tables 4.1 and 4.2 are expressed in Canadian funds equivalent so as to provide for comparisons to similar data for government assistance to agriculture in Canada. These similar data for Canada and British Columbia, derived from the Canada report, are included in these tables for comparative purposes.

The data in Table 4.1 show that total U.S. federal government assistance to agriculture in 1982/3 was about $41.4 billion in Canadian funds equivalent. Of this amount about $38.2 billion or about 92 percent was in the form of immediate assistance and only about $3.3 billion or about eight percent was in the nature of long term assistance.

Allocations of federal program expenditures to the states are not normally made by the U.S. federal government for some programs involved in this study. Consequently there were no readily available data for the amounts of some federal program expenditures which might be allocated to the states involved in this study. Further, the determination of such allocations was generally advised to be complex and time consuming. The budget and time constraints on this study did not allow any comprehensive analysis of these allocation problems. However, this area may be one for future research.

The major federal program expenditures falling into the unallocated category are (together with their federal expenditures in 1982/3 in Canadian dollar equivalents): the PL 480 program ($1.5 billion), some Commodity Credit Corporation expenditures ($4.8 billion), the Food and Nutrition Service Program expenditures (farm portion $6.5 billion), and the FHA interest subsidy ($3.9 billion). These expenditures together with the other unallocated federal assistance represent about $21.4 billion in Canadian funds equivalent in this study. Consequently, the analysis included in Tables 4.1 and 4.2 only includes allocations of about 50 percent of the total of all the federal expenditures identified. The following comments relate to the expenditures which have been allocated.

The pattern of immediate and long term assistance in each of the states is different from that described for the total amount of U.S. federal assistance. In the total of federal assistance, 92 percent of the total is immediate assistance. The levels of

TABLE 4.1: FEDERAL GOVERNMENT ASSISTANCE TO AGRICULTURE. U.S.A. AND CANADA. 1982/3 (a).

	USA	California	Oregon	Washington	B.C.	Canada
			(CAN $ 000's)			
I. ASSISTANCE PROVIDING IMMEDIATE (ANNUAL) BENEFITS TO FARMERS						
A. REVENUE ENHANCING						
1. Product Purchase/Compensation	10,858,052	11,843	10,260	31,565	6,350	553,665
2. Stabilization Payments	18,911,738	323,137	75,469	170,547	1,122	121,037
3. Market Support and Infrastructure	1,064,652	0	0	0	61,063	1,144,475
Total Revenue Enhancing:	30,834,442	334,980	85,730	202,112	68,535	1,819,177
% of Total Immediate Assistance	80.8%	89.6%	88.4%	94.0%	92.2%	88.9%
B. COST REDUCING						
4. Agricultural Credit	5,007,063	20,795	10,213	10,071	3,192	79,021
5. Tax Benefits	1,955,700	0	0	0	0	0
6. Other Farm Inputs	357,388	18,112	1,046	2,865	2,582	147,487
Total Cost Reducing:	7,320,152	38,907	11,259	12,937	5,774	226,508
% of Total Immediate Assistance	19.2%	10.4%	11.6%	6.0%	7.8%	11.1%
TOTAL IMMEDIATE ASSISTANCE:	38,154,593	373,887	96,989	215,048	74,309	2,045,685
% of Total Federal Assistance	92.1%	64.6%	80.6%	62.3%	65.8%	75.7%
II. ASSISTANCE PROVIDING LONG TERM BENEFITS TO FARMERS						
7. Land and Farm Development	0	0	0	0	0	0
8. Rural Infrastructure	1,682,393	149,007	12,905	112,658	15,411	338,800
9. Research	1,313,618	55,823	10,454	17,557	22,031	221,256
10. Other	289,995				1,192	94,844
TOTAL LONG TERM ASSISTANCE:	3,286,006	204,831	23,359	130,215	38,634	654,900
% of Total Federal Assistance	7.9%	35.4%	19.4%	37.7%	34.2%	24.3%
III. TOTAL FEDERAL:	41,440,599	578,718	120,348	345,263	112,943	2,700,585

Source: Derived from Appendix B, Table B.1 and Arcus Consulting Limited (1985), Table 3.1 ACL33
Exchange Rate: $US 1.00 = $1.23 Canadian BCMUSFED

a. Fiscal 1982/3 in Canada. U.S. data periods vary but all approximate this period as well as possible. (See script, Ch. 3)

immediate federal assistance in the three states studied are lower, between 60 and 80 percent of the total amount. Relative levels of long term assistance are accordingly higher in these three states.

Within the category of immediate assistance, federal revenue enhancing assistance to the three states' agricultures represents between 88 and 94 percent of the total immediate assistance. Cost reducing federal assistance is a small portion of the total immediate federal assistance, between six and 12 percent in each of the three states studied.

These patterns of assistance in the three states are similar to those in B.C. and Canada within the "Immediate Assistance" category but are noticably different in the proportions provided as immediate and long term assistance at the aggregate level in the U.S.A. The proportion of immediate assistance at the national level in the U.S.A. is higher than in Canada. The relative level of immediate assistance in the U.S., is 92 percent. This compares to 76 percent in Canada.

RELATIVE LEVELS OF FEDERAL ASSISTANCE

Table 4.2 presents information showing the relative levels of federal assistance in the U.S.A, the three states studied, B.C., and Canada. In this table the total amount of federal assistance provided to each state is expressed in relation to three criteria. These criteria are population, number of census farmers and gross value of farm production.

The data in this table show that, the amount of allocated federal assistance per capita in the three states ranges from $23 in California to $81 in Washington. These levels compare to $40 and $110 per capita in B.C. and Canada, respectively. Accordingly, allocated federal expenditures are about the same in Oregon and B.C. They are higher in Washington and lower in California. At the national level in the two countries, total federal assistance in the U.S.A. identified in this study is about 60 percent higher than the amounts of federal assistance identified in the Canadian study.

The amount of allocated U.S. federal assistance provided per census farmer in the three states studied ranges from $3,531 in Oregon to $9,569 in Washington. These amounts are greater than the amount of a similar estimate for B.C. in two of the states, California and Washington, considerably so in the case of Washington. At the national level, the allocated federal assistance in the U.S.A. is over twice as much as the Canadian equivalent estimate, although part of the reason for this observation may lie in the differences in definitions of census farms in the two countries. Because of the different definitions, there are relatively more census farms in Canada. This may account, in part, for the difference observed.

TABLE 4.2: ANALYSIS OF FEDERAL ASSISTANCE 1982/83.

	USA	California	Oregon	Washington	B.C.	Canada
STATE/PROVINCIAL PARAMETERS						
Population 1982: 000's	231,786	24,697	2,668	4,276	2,790	24,563
No. of Census Farmers	2,240,976	82,463	34,087	36,080	20,012	318,361
			($ CAN millions)			
Gross Value of Farm Production 1982:	$199,451	$18,436	$2,554	$4,234	$956	$19,372
FEDERAL ASSISTANCE 1982/3:	$41,441	$579	$120	$345	$113	$2,701
			($ CAN)			
Per Capita:	$179	$23	$45	$81	$40	$110
Per Census Farmer:	$18,492	$7,018	$3,531	$9,569	$5,644	$8,483
Per Dollar of Value Farm Production:			(CAN cents)			
Immediate (Annual) Assistance						
Revenue Enhancing	15	2	3	5	7	9
Cost Reducing	4	0	0	0	1	1
Total Immediate:	19	2	4	5	8	11
Long Term:	2	1	1	3	4	3
Total Federal Assistance:	21	3	5	8	12	14

a. Definition of a census farm varies between two countries. (See script, Ch.3)
Sources: Tables 3.1, 3.2, and 4.1

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The amount of allocated federal assistance per dollar of gross value of farm production in the three states ranges from three cents in California to eight cents in Washington. These values compare to 12 cents in B.C. and 14 cents in Canada. However, the total amount of federal assistance nationally in the U.S.A. is 21 cents which is above both the Canadian and B.C. levels. At the federal level in the U.S.A., the total amount of assistance per dollar of the value of farm production is 50 percent higher than the average level of federal assistance in Canada.

The three west coast states of the U.S.A. receive proportionately lower amounts of federal assistance than the U.S. national average mainly because the major federal programs in the U.S. are commodity oriented and these three states have relatively lower levels of production of the commodities assisted under the U.S. federal programs than the average state in the U.S.A. (Washington State Department of Agriculture 1985).

As noted above, the three state statistics do not include an allocation of all federal assistance to U.S. agriculture. Only about 50 percent of the U.S. federal assistance identified in this study is allocated to the states included in Tables 4.1 and 4.2. The major program expenditures which are unallocated in these tables are those of the Food and Nutrition Service, Public Law 480, Farmers' Home Administration Interest assistance, and some Commodity Credit Corporation costs. This situation is discussed further in Chapter 7 (where a full allocation of all U.S. federal assistance to agriculture is considered).

Chapter 5

STATE ASSISTANCE

In this chapter we present the findings of the analysis of state assistance to agriculture in the three west coast states of the U.S.A. The data are summarised in Table 5.1 and are analysed in this table and Table 5.2. Information on the individual programs of assistance to agriculture in each of the three states appears in Appendix C, in Tables C.1 through C.3.

As noted in Chapter 3, the roles of the state departments of agriculture in the three states studied are different from those of the Canadian provincial departments of agriculture. The functions assigned to the state departments of agriculture in the U.S. tend to be regulatory in nature and to focus on health and safety. There is also some state department of agriculture assistance for agricultural products marketing in each of the three states, but this consists largely of providing vehicles by which producer funds can be collected and disbursed in support of market development. The data in the tables which follow reflect this pattern of state assistance to agriculture in the three states studied.

Not immediately obvious in the state data reported in Tbales 4.1 and 4.2 is a provision in each state for emergency assistance to agriculture. A case in point is the 1980 outbreak of Mediterranean Fruit Fly in California. In this case, "On December 24, 1980, Governor Brown,.... proclaimed a state of emergency and directed all agencies to utilize their resources in alleviating the emergency to eradicate the Medfly. In addition to this, several statutes were enacted to provide funding for the Medfly eradication effort." As a result, "On September 21, 1982, the Medfly was officially declared eradicated; ending an emergency which lasted 27 months and cost nearly $100 million." (California. Governor's Budget 1984-85. p. GG 179.). This expenditure represents over $40 million per year in emergency funding in this case. The California State Department of Agriculture and Food was the main agency involved (spending $42.8 million in fiscal 1981-82) but other departments, notably the Department of Transportation ($5.3 million), the Military Department ($1.3 million), and the Department of Water Resources, California Highway Patrol, State Controller's Office, and the California Conservation Commission each spent in excess of three quarters of a million dollars on the effort in California fiscal 1981-82 (ibid).

The data in Table 5.1 show that, in the state fiscal year 1982-83, the total amounts of state government assistance to agriculture in each of the three states ranged from about $73.0 million in Oregon to about $419.8 million in California. These

TABLE 5.1: SELECTED STATE AND PROVINCIAL GOVERNMENT ASSISTANCE TO AGRICULTURE. U.S.A. AND CANADA. 1982/3.

	Cal	Oregon	Wash	B.C.
		($CAN 000's)		
I. ASSISTANCE PROVIDING IMMEDIATE (ANNUAL) BENEFITS TO FARMERS				
A. REVENUE ENHANCING				
Product Compensation	0	0	0	689
Stabilization	0	0	0	30,903
Market Support & Infrastructure	53,264	1,721	1,963	52,470
Total Revenue Enhancing:	53,264	1,721	1,963	84,062
% State Immed. Assistance	17.2%	3.4%	1.5%	85.4%
B. COST REDUCING				
Agricultural Credit	0	25,072	0	10,191
Tax Benefits	170,324	20,541	126,418	3,356
Other Farm Inputs	85,966	2,757	2,124	770
Total Cost Reducing:	256,290	48,370	128,542	14,317
% State Immed. Assistance	82.8%	96.6%	98.5%	14.6%
Total Immediate Assistance:	309,554	50,091	130,505	98,379
% of Total State Assistance:	73.7%	68.7%	80.6%	74.0%
II. ASSISTANCE PROVIDING LONG TERM BENEFITS TO FARMERS				
Land and Farm Development	0	128	0	5,551
Rural Infrastructure	0	1,207	6,688	1,105
Research and Extension	103,936	20,919	23,831	6,016
Total State Long Term Assistance:	103,936	22,254	30,519	12,672
% of Total State Assistance:	24.8%	30.5%	18.9%	9.5%
III. OTHER ASSISTANCE (Unallocated)	6,328	617	851	21,805
% of Total State Assistance:	1.5%	0.8%	0.5%	16.4%
IV. TOTAL STATE	419,818	72,962	161,875	132,856

Sources: Appendix C: Tables C.1 through C.3 and
Arcus Consulting Limited 1985, Table 4.1.

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values compare with $132.9 million in B.C. in the same time period (all amounts in Canadian funds or equivalent).

Over 68 percent of the state expenditures reported are for programs of immediate assistance to farmers. Most of the immediate assistance, over 82 percent in each of the three states, is for cost reducing assistance. Much of this latter assistance is for disease and pest control (included in the "Other Farm Inputs" category). In the category of long term assistance, research and extension expenditures are major items in all of the three states studied.

The patterns of immediate assistance observed in all three states is considerably different from that observed in B.C. although the division between immediate and long term assistance is similar. Cost reducing assistance is emphasised in the immediate assistance category in all three states. In B.C., the pattern is almost the opposite. Most of the immediate assistance is for revenue enhancement.

RELATIVE LEVELS OF STATE ASSISTANCE

Table 5.2 presents the amounts of state/provincial assistance in a comparative format. The total amounts of state government assistance to agriculture in each of the three states are compared on the basis of state population, number of census farmers, and gross value of farm production in each state.

Per capita, total state assistance lies between $17 and $38 in the three states studied. These levels are lower than the level in B.C., $48 per capita.

State government support of agriculture per census farm is highest in California. There, the amount is $5,091 Canadian funds equivalent. This is less than the amount of assistance per census farmer in B.C., $6,639 and more than double the amount per census farm in Oregon, $2,140. The amount in Washington is $4,487 Canadian funds equivalent.

On the basis of the gross dollar value of production, levels of state government assistance in three U.S. states studied are low relative to B.C. In none of the three states studied does the level of state assistance exceed 30 percent of the B.C. amount. The amounts are two, three and four cents per dollar of gross value of farm production in California, Oregon and Washington, respectively. The equivalent amount in B.C. is 14 cents.

TABLE 5.2: ANALYSIS OF SELECTED STATE AND PROVINCIAL ASSISTANCE 1982/3.

		Cal.	Oregon	Wash.	B.C.
TOTAL STATE/PROVINCIAL ASSISTANCE 1982/3: (3) Canadian millions		$419.8	$73.0	$161.9	$132.9
STATE/PROVINCIAL PARAMETERS:					
Population 1982: 000's	(1)	24,697	2,668	4,276	2,790
No. of Census Farmers	(2)	82,463	34,087	36,080	20,012
Gross Domestic Product: 1982: $CAN billions	(1)				$44.5
Gross Value of Farm Prodn. 1982: $CAN millions	(2)	$18,436	$2,554	$4,234	$955
STATE/PROVINCIAL ASSISTANCE 1982/3:					
Percent of GDP					2.1%
Per Capita:		$17	$27	$38	$48
Per Census Farmer:		$5,091	$2,140	$4,487	$6,639
Per dollar of value of farm production:			cents CAN		
Immediate (Annual) Assistance		0	0	0	9
Revenue Enhancing		1	2	3	1
Cost Reducing		2	2	3	10
Total Immediate:					
Long Term:		1	1	1	1
Other (Unallocated):		0	0	0	2
Total State Assistance:		2	3	4	14

Sources: 1. Table 3.1
2. Table 4.2
3. Table 5.1

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Chapter 6

TOTAL GOVERNMENT ASSISTANCE

In this chapter, data summarizing the totals of federal assistance to agriculture in the U.S.A. and federal and state assistance to agriculture in each of the three states studied and in B.C. and Canada are presented and discussed. The data are contained in Tables 6.1, 6.2, and 6.3. (All dollar amounts are in Canadian funds or Canadian funds equivalent.) The total amount of federal and state assistance in the U.S. in total is unavail;able in these three tables as the study included only the three west coast states. Data for the other 47 states would be required to complete the U.S.A. state total and average items in these tables. The conclusions deriving from these three tables are qualified accordingly.

The totals of allocated federal assistance in the U.S.A. and the totals of the federal and state assistance in the three states studied are shown in Table 6.1. The amounts of total assistance in the three states studied range from about $193 million in Oregon to almost $1.0 billion in California. The level of total support of agriculture in B.C., $246 million, is greater than the level of total support identified for Oregon but is less than the amount identified for the State of Washington, $507 million. The amount of total state and federal support in California is about four times the amount in B.C.

The total amount of all federal assistance to agriculture in the U.S.A. is about $41 billion; about nine times the amount of the total federal and provincial assistance in Canada, $4.6 billion.

The pattern of total assistance in each of the three states studied is shown in Table 6.2. The data in this table show that federal assistance accounts for about 58 percent of the total government assistance to agriculture in California, 62 percent in Oregon and 68 percent in Washington. These percentages are well above the federal level of assistance to agriculture in B.C., which is about 46 percent.

This table also shows that within the category of immediate federal assistance, revenue enhancement receives the greater emphasis in U.S. federal programming. Relative levels of federal immmediate revenue enhancing program expenditures in the three statesstudied are above the relative level observed in B.C.

In state assistance, the pattern of relative assistance is one of significant emphasis on immediate assistance in all three states. Most of the expenditures fall in the cost reducing category. This is in strong contrast to B.C. where revenue enhancement programs represent the larger share of immediate assistance.

TABLE 6.1: TOTAL GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3.
U.S.A. AND CANADA.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3:				($CAN 000's)		
Federal (1)						
Immediate						
Revenue Enhancing	30,834,442	334,980	85,730	202,112	68,535	1,819,177
Cost Reducing	7,320,152	38,907	11,259	12,937	5,774	226,508
Total Immediate	38,154,594	373,887	96,989	215,049	74,309	2,045,685
Long Term	3,286,006	204,831	23,359	130,215	38,634	654,900
Total Federal	41,440,600	578,718	120,348	345,264	112,943	2,700,585
State (2)						
Immediate						
Revenue Enhancing		53,264	1,721	1,963	84,062	563,231
Cost Reducing		256,290	48,370	128,542	14,317	685,587
Total Immediate		309,554	50,091	130,505	98,379	1,248,818
Long Term		103,936	22,254	30,519	12,672	265,188
Other (unallocated)		6,328	617	851	21,805	393,083
Total State/Prov		419,818	72,962	161,875	132,856	1,907,089
Total Federal and State	41,440,600	998,536	193,310	507,139	245,799	4,607,674

a. State data incomplete. Only three states studied.

Sources: 1. Table 4.1 and Arcus Consulting Limited, 1985. Table 3.1.
2. Table 5.1 and Arcus Consulting Limited, 1985. Table 4.1.

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TABLE 6.2: SHARES OF GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3.
U.S.A. AND CANADA.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3:						
FEDERAL:						
Immediate						
Revenue Enhancing	74.4%	33.5%	44.3%	39.9%	27.9%	39.5%
Cost Reducing	17.7%	3.9%	5.8%	2.6%	2.3%	4.9%
Total Immediate	92.1%	37.4%	50.2%	42.4%	30.2%	44.4%
Long Term	7.9%	20.5%	12.1%	25.7%	15.7%	14.2%
Total Federal	100.0%	58.0%	62.3%	68.1%	45.9%	58.6%
STATE:						
Immediate						
Revenue Enhancing		5.3%	0.9%	0.4%	34.2%	12.2%
Cost Reducing		25.7%	25.0%	25.3%	5.8%	14.9%
Total Immediate		31.0%	25.9%	25.7%	40.0%	27.1%
Long Term		10.4%	11.5%	6.0%	5.2%	5.8%
Other (unallocated)		0.6%	0.3%	0.2%	8.9%	8.5%
Total State/Prov		42.0%	37.7%	31.9%	54.1%	41.4%
Total Federal and State	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

a. State assistance from three states studied only. Analysis made on federal data only.

Basis: Table 6.1

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A comparison of relative levels of total assistance in the three states studied and in B.C. and Canada is provided in Table 6.3.

On a per capita basis, total government assistance to agriculture, $179, howbeit only federal assistnce in this total, is similar in amount to the total of all assistance to agriculture in Canada, $188. At the state and provincial levels, total assistance per capita is higher in Washington, $119, and lower in Oregon, $72, and in California, $40, than in B.C., where is is $88 per capita.

Per census farmer, the total (federal only) assistance was $18,363 nationally in the U.S.; while the allocated total government assistance to agriculture was $12,109 in California, $5,671 in Oregon, and $14,056 in Washington in 1982/3. The level of assistance in Washington is higher, under this criterion, than in B.C., $12,285, although the difference in definition of a census farm in the two countries (for which see Chapter 3) may be a factor in this comparison of levels of assistance.

On the basis of the gross value of farm production, the level of total allocated assistance (federal only) in the U.S.A. is 21 cents. This compares to 24 cents in Canada. A comparison of the three states' data for total government assistance per dollar of gross value of farm production and the B.C. level of the same parameter shows relatively low levels of support in the three states studied; five, eight and 12 cents per dollar in California, Oregon, and Washington, respectively, when compared to B.C. which has total government assistance to agriculture of 26 cents per dollar of gross value of farm production. The levels of total assistance to agriculture in the three states studied are all below half the amount of the total assistance to agriculture in B.C. However, these totals for the three states omit any allocation of about half the federal expenditures on agriculture in the U.S.A. The effect of this situation is considered further in Chapter 7, following.

TABLE 6.3: ANALYSIS OF TOTAL GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3. U.S.A. AND CANADA.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3 (1)		$ Canadian millions				
Federal:	$41,440.6	$578.7	$120.3	$345.3	$112.9	$2,700.6
State/Prov:		$419.8	$73.0	$161.9	$132.9	$1,907.1
Total:	$41,440.6	$998.5	$193.3	$507.1	$245.8	$4,607.7
STATE/PROVINCIAL PARAMETERS (2)						
				thousands		
State/Prov Population	231,786	24,697	2,668	4,276	2,790	24,563
No. of Census Farmers	2,240,976	82,463	34,087	36,080	20,012	318,361
		$ Canadian millions				
Gross Val. of Farm Prod'n 1982	$199,451	$18,436	$2,554	$4,234	$955	$19,372
GOVERNMENT ASSISTANCE:						
Per Capita						
Federal	$179	$23	$45	$81	$40	$110
State/Prov		$17	$27	$38	$48	$78
Total	$179	$40	$72	$119	$88	$188
Per Census Farmer						
Federal	$18,492	$7,018	$3,531	$9,569	$5,644	$8,483
State/Prov		$5,091	$2,140	$4,487	$6,639	$5,990
Total	$18,492	$12,109	$5,671	$14,056	$12,283	$14,473
Per dollar of Gross Value of Farm Production						
Federal	21	3	5	8	12	14
State/Prov		2	3	4	14	10
Total	21	5	8	12	26	24

a. State assistance from three states studied only. Analysis made on federal data only.

Sources: 1. Table 6.1
2. Table 3.1 and 3.2

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Chapter 7

DISCUSSION

In this chapter the findings reported above are discussed.

INITIAL FINDINGS

The findings in this report are initial findings. As noted in the chapters above and in the appendices, some of the information required for the study was not available at the time of the study, or it was incomplete. Included in this analysis is all the information available to the study through September 30, 1985. (In cases where program titles but no program expenditure information could be obtained, program names have been included in the tables to indicate the existance of program assistance even though no data for expenditures is presented.)

COMPARABILITY OF DATA

The data presented in Chapters 4 through 6 are only partially comparable with the information collected in the Canada report. There are programs of government assistance in both countries for which no data were available at the time of the study. Further, the programs for which the information was not available in each country were not necessarily the same in the two countries.

There is variation in the extent to which the federal government expenditures are allocated to the states/provinces as between the two countries. In the Canadian data, about 92 percent of federal expenditures were allocated to the provinces. Thus, the data for B.C. contains most of the federal assistance which could be allocated to that province in Canadian part of the study. By contrast, the tables in Chapter 4 of this report involve allocation of only about 50 percent of the U.S. federal assistance identified in the study.

Thus, while the data presented above are accurate in what they report, the comparisons presented can be refined. This has been done by making the following adjustment to the U.S. federal data to make it more comparable to the Canadian data.

All unallocated U.S. federal government expenditures have been allocated to the three states in proportion to each state's gross value of farm production (in accordance with the client's instruction). This process of allocation assumes that each state receives federal support from the programs so allocated in proportion to its gross value of farm production.

TABLE 7.1: TOTAL GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3.
U.S.A. AND CANADA. ALL FEDERAL EXPENDITURES ALLOCATED.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3:						
				($CAN 000's)		
Federal (1)						
Immediate						
Revenue Enhancing	30,834,442	1,650,426	267,974	504,237	68,535	1,819,177
Cost Reducing	7,320,152	618,214	91,517	145,989	5,774	226,508
Total Immediate	38,154,594	2,268,640	359,491	650,226	74,309	2,045,685
Long Term	3,286,006	280,972	33,882	147,660	38,634	654,900
Total Federal	41,440,600	2,549,613	393,373	797,886	112,943	2,700,585
State (2)						
Immediate						
Revenue Enhancing		53,264	1,721	1,963	84,062	563,231
Cost Reducing		256,290	48,370	128,542	14,317	685,587
Total Immediate		309,554	50,091	130,505	98,379	1,248,818
Long Term		103,936	22,254	30,519	12,672	265,188
Other (unallocated)		6,328	617	851	21,805	393,083
Total State/Prov		419,818	72,962	161,875	132,856	1,907,089
Total Federal and State	41,440,600	2,969,431	466,335	959,761	245,799	4,607,674

a. State data incomplete. Only three states studied.

Sources: 1. Table D.1 and Arcus Consulting Limited, 1985. Table 3.1.
2. Table 5.1 and Arcus Consulting Limited, 1985. Table 4.1.

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TABLE 7.2: SHARES OF GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3.
U.S.A. AND CANADA. ALL FEDERAL EXPENDITURES ALLOCATED.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3:						
FEDERAL:						
Immediate						
Revenue Enhancing	74.4%	55.6%	57.5%	52.5%	27.9%	39.5%
Cost Reducing	17.7%	20.8%	19.6%	15.2%	2.3%	4.9%
Total Immediate	92.1%	76.4%	77.1%	67.7%	30.2%	44.4%
Long Term	7.9%	9.5%	7.3%	15.4%	15.7%	14.2%
Total Federal	100.0%	85.9%	84.4%	83.1%	45.9%	58.6%
STATE:						
Immediate						
Revenue Enhancing		1.8%	0.4%	0.2%	34.2%	12.2%
Cost Reducing		8.6%	10.4%	13.4%	5.8%	14.9%
Total Immediate		10.4%	10.7%	13.6%	40.0%	27.1%
Long Term		3.5%	4.8%	3.2%	5.2%	5.8%
Other (unallocated)		0.2%	0.1%	0.1%	8.9%	8.5%
Total State/Prov		14.1%	15.6%	16.9%	54.1%	41.4%
Total Federal and State	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

a. State assistance from three states studied only. Analysis made on federal data only.

Basis: Table 7.1

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TABLE 7.3: ANALYSIS OF TOTAL GOVERNMENT ASSISTANCE TO AGRICULTURE. 1982/3.
U.S.A. AND CANADA. ALL FEDERAL EXPENDITURES ALLOCATED.

	U.S.A. (a)	Calif	Oreg	Wash	B.C.	Canada
GOVERNMENT ASSISTANCE 1982/3 (1)			$ Canadian millions			
Federal:	$41,440.6	$2,549.6	$393.4	$797.9	$112.9	$2,700.6
State/Prov:		$419.8	$73.0	$161.9	$132.9	$1,907.1
Total:	$41,440.6	$2,969.4	$466.3	$959.8	$245.8	$4,607.7
STATE/PROVINCIAL PARAMETERS (2)			thousands			
State/Prov Population	231,786	24,697	2,668	4,276	2,790	24,563
No. of Census Farmers	2,240,976	82,463	34,087	36,080	20,012	318,361
			$ Canadian millions			
Gross Val. of Farm Prod'n 1982	$199,451	$18,436	$2,554	$4,234	$955	$19,372
GOVERNMENT ASSISTANCE:						
Per Capita						
Federal	$179	$103	$147	$187	$40	$110
State/Prov		$17	$27	$38	$48	$78
Total	$179	$120	$175	$224	$88	$188
Per Census Farmer						
Federal	$18,492	$30,918	$11,540	$22,114	$5,644	$8,483
State/Prov		$5,091	$2,140	$4,487	$6,639	$5,990
Total	$18,492	$36,009	$13,681	$26,601	$12,283	$14,473
Per dollar of Gross Value of Farm Production						
Federal	21	14	15	19	12	14
State/Prov		2	3	4	14	10
Total	21	16	18	23	26	24

a. State assistance from three states studied only. Analysis made on federal data only.

Sources: 1. Table 7.1
2. Table 3.1 and 3.2

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This change affects only the pattern of federal assistance to agriculture in the three states of the U.S.A. included in the study. When this adjustment is made, the pattern of findings is that observed in Tables 7.1 through 7.3.

Under this assumption, the total of federal and state assistance to agriculture in each of the three states increases to the levels shown in Table 7.1. Total assistance in California increases to almost $3 billion. In Oregon the total assistance is estimated to be about $466 million, and, in Washington, the total assistance to agriculture is about $960 million (all amounts in Canadian funds equivalent). The amount in Oregon is about double that in B.C. while the amount in Washington is almost four times and in California about 12 times as great as B.C.

Table 7.2 shows that, under this assumption, the federal share of total assistance in the three states studied rises to between 83 and 86 percent of the total and the state share falls to between 17 and 14 percent, depending upon the state. Federal programming in the U.S. continues to emphasise immediate assistance in this analysis and within that category, revenue enhancement provides the larger share of assistance in all three states. At the state level of government assistance, revenue enhancing assistance is negligible in this analysis, while cost reducing assistance dominates. These are very different patterns of government assitance from those observed in B.C. and Canada where federal assistance averages only about 46 percent of all assistance in B.C. and about 58 percent on average in Canada.

The information in Table 7.3 shows that, under this assumption, levels of assistance per capita, per census farm, and per dollar of gross value of farm production in the three states studied all increase. Levels of total support per capita are higher, under this assumption, in each of the three states than in B.C. but are still lower than the average level in Canada except in Washington State where the per capita level of assistance is the highest of all areas considered.

Per census farm, the level of government assistance is higher for the U.S.A. in total, and in each state studied, than in B.C. and in Canada. However, part of this observation derives from the fact that the definitions of census farms are different in the two countries. Under the definitions used, the U.S. has fewer census farms and this will, in part, give rise to higher estimates of total government assistance per farm.

Under the assumption that unallocated federal assistance can be allocated to the states on the basis of gross value of farm production, total assistance per dollar of value of farm production in each of the states studied is less than the amounts recorded in B.C. and Canada, although the level of total assistance observed in the State of Washington under this assumption is close to the Canadian average level. At the other extreme, the level of support in California is only about two-thirds that of B.C. and in Canada on average.

Chapter 8

CONCLUSIONS

This report has presented and analysed of the types and amounts of federal government assistance to agriculture in the U.S.A. and the types and amounts of federal and state government assistance to agriculture in the three west coast states of the U.S.A.: California, Oregon, and Washington, for annual periods of time approximating the Canadian fiscal year April 1, 1982 through March 31, 1983. The data and analysis lead to the following conclusions.

1. Agriculture in the U.S. is both similar to and different from agriculture in Canada. The similarities and differences lead to some similarities and some differences in the types and amount of government assistance to agriculture observed in the two countries and in the three states and the ten provinces studied.

2. Among the similarities observed are the appearance of both federal and state/provincial departments of agriculture in the governments of the two countries. These departments of agriculture deliver most of the programs of direct assistance to agriculture. Tax concessions to agriculture and farmers are also characteristic of both countries. These programs of assistnace include special provisions for farmers in the application of property taxes, income taxes, retail sales and excise taxes, and fuel taxes.

3. One major difference observed between the two countries is that agricultural water is administered under programs related to water rather than programs related to agriculture in the U.S.A. This is in contrast to the situation in Canada where agricultural water programs are generally administered in and through the federal and provincial departments of agriculture. The major agencies involved in water programs of benefit to agriculture in the U.S.A. are the U.S. Department of the Interior, Bureau of Reclamation and the state Departments of Water Resources in California and Oregon and the State Department of Ecology in Washington State.

4. Financial accounting of expenditures on water developments in these departments tend to be on a project basis. Attribution of costs and/or benefits to a single beneficiary such as agriculture (irrigation), in what are generally multi-user water projects, is complex. Consequently there were few readily available estimates of costs of assistance of the type sought for this study. The estimates presented in the study findings are approximations. Further research in this area is indicated.

5. The approach to agricultural assistance in the U.S.A. is different from that taken in Canada. The federal government in

the U.S. provides by far the largest share of the fully allocated total assistance to U.S. agriculture, between 83 and 86 percent in the three states studied. This is in contrast to the situation in Canada where the federal share is about 46 percent in B.C. and about 58 percent on average across the country.

6. Federal assistance to agriculture in the U.S.A., in the annual time period examined, totalled about $41.4 billion in Canadian funds equivalent.

7. An equal measure for the total of all state expenditures on agriculture in the U.S. is not available from this study as information on state expenditures was only collected for three states designated for inclusion in this study.

8. The role of the state governments in providing direct assistance to agriculture, in the three states studied, is minimal. Actual state department of agriculture expenditures of tax dollars (they also disburse industry trust funds and federal funds) are almost nominal. In this study the amounts of state tax dollars spent by the three state departments of agriculture in their fiscal 1982/3, in Canadian funds equivalent, were: California, $145 million (gross); Oregon, $5 million (net); and Washington, $5 million (net). Most of these state departments of agriculture expenditures are regarded by their administrators as regulatory in nature, providing for safety and health in food production and marketing.

9. The major categories of assistance to agriculture provided by the state governments in the three states studied are tax expenditures (exemptions, through the state departments of revenue) and state funding of agricultural research and extension (made through departments of education or higher education).

10. The estimates of state assistance to agriculture in the three states studied, in Canadian dollars equivalent, are: California, $419 million; Oregon, $73 million; and Washington, $161 million. These values compare to $133 million in B.C.

11. Estimates of total (federal plus state) assistance to agriculture in the three states studied proved difficult to establish because allocations of about 50 percent of the federal assistance to the 50 states are lacking. A set of minimum estimates has been prepared using the data for which allocations to the states do exist. Another set of estimates, based upon the assumption that the unallocated U.S. federal assistance can be allocated to the states on the basis of estimates of the gross value of farm production, has also been prepared.

12. The minimum and full allocation values for the total of federal and state assistance to agriculture identified in this study are: California, $999 and $2,969 million; Oregon, $193 and $466 million; and Washington, $507 and $960 million, respectively.

13. These amounts of total assistance have been compared to similar estimates of the amounts of total government assistance to agriculture in B.C. and Canada. There are three bases of comparison: population, number of census farms, and gross value of farm production. Data for all three comparisons are presented in the body of the report.

14. Using the criterion of gross value of farm production in each of the three states studied and nationally in the U.S. and in B.C. and Canada, the minimum and full allocation estimates of total (federal and state) government assistance are: U.S.A. (federal only), 21 cents; California, five and 16 cents; Oregon, eight and 18 cents; and Washington, 12 and 23 cents (all amounts in Canadian funds). These values compare to 26 cents in B.C. and 24 cents nationally in Canada. Thus, it is concluded thath the level of government assistance to agriculture in Washington State may be close to the average Canadian level but somewhat below the B.C. level. The levels of total assistance in the other two states studied are considerably below those in B.C. and in Canada on average .

15. The findings in this report are initial findings. Additional data is required to complete the estimates of assistance accruing through tax exemptions and the assistance accruing through some of the major water developments in the U.S. states studied. As well, the expenditures for pest control in California clearly vary widely between years, and these expenditures may well vary in the other two states studied as well. Accordingly, an examination of government assistance to agriculture over a longer time period may be more appropriate to establish representative levels for this type of assistance. As well, the question of a basis for allocating about 50 percent of federal assistance to agriculture in the U.S., to the states, needs further attention and possible refinement.

16. It is apparent that the types and amounts of federal and state/provincial government assistance to agriculture varies quite considerably between the two countries. Of significance in this study is the larger part played by the federal government in the U.S.A. relative to the levels of support for agriculture provided by the states in the three states studied. Federal assistance per dollar of gross value of farm production is considerably higher in the U.S. in total; 50 percent higher than a similar measure of federal government assistance to agriculture in Canada. However, levels of state assistance to agriculture, per dollar of gross value of farm production, in the three states studied, are much lower than in Canada, on average, or in B.C. Overall, on a fully allocated basis, assistance to agriculture in California is about two thirds the level in Canada while in Oregon and Washington it is higher, almost as high as the Canadian average in Washington, but still somewhat below the level of total support per dollar of gross value of farm production in British Columbia.

17. The findings are initial findings in both this study and the antecedant Canada report from which data is drawn for this report. Additional data on federal and state/provincial assistance to agriculture in the two countries, particularly in the area of tax exemptions (expenditures), may modify these conclusions.

18. As well, additional work is indicated in the areas of allocating about 50 percent of U.S. federal assistance to agriculture and in assessing the amount of assistance provided agricultural water users (irrigators) under the projects of water baisin development administered by the Bureau of Reclamation in the U.S. An examination of data for more than one fiscal year would assist in establishing norms for some programs, such as state assistance to agriculture through pest control, which, data from California suggests, is widely variable from year to year. Such longer periods of time may also be useful in assessing more accurately typical patterns of federal assistance to U.S. agriculture.

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APPENDICES

APPENDIX A

TABLE A.1: PRODUCTION IN THE WEST COAST STATES. 1982.

Crop	Source (1) Tbl.	Page	Units	WASH	OREG	CALIF	THREE	USA
I. GRAINS								
Wheat	8	6-7						
Winter			000's bu	125,440	59,400	65,550	250,390	2,073,560
Durum			000's bu			11,625	11,625	145,863
Spring			000's bu	13,440	4,100		17,540	545,544
Total			000's bu	138,880	63,500	77,175	279,555	2,764,967
			000 tonnes	3,779	1,728	2,100	7,607	75,237
Rye	20	16	000's bu	0	116	0	116	19,533
			000 tonnes	0	3	0	3	496
Rice	30	21	000's cwt.	0	0	35,848	35,848	153,637
			000 tonnes	0	0	1,626	1,626	6,968
Corn	42	32	000's bu	24,000	6,240	42,900	73,140	8,235,107
			000 tonnes	610	159	1,090	1,858	209,183
Oats	52	40	000's bu	1,860	6,375	3,350	11,585	592,630
			000 tonnes	29	98	52	179	9,140
Barley	59	45	000's bu	49,410	15,500	38,440	103,350	515,935
			000 tonnes	1,076	337	837	2,250	11,233
Total Grains			000 tonnes	5,493	2,325	5,704	13,522	312,256
II. OILSEEDS								
Cottonseed	141	109	000's tons			1,280	1,280	4,744
			000 tonnes	0	0	1,162	1,162	4,305
Flaxseed	149	115	000 bu	0	0	0	0	10,278
			000 tonnes	0	0	0	0	261
Peanuts	162	123	000 lbs.	0	0	0	0	3,440,255
			000 tonnes	0	0	0	0	1,561
Soybeans	171	128	000's bu	0	0	0	0	2,190,297
			000 tonnes	0	0	0	0	59,610
Sunflowers	181	133	000 lbs.	0	0	0	0	5,332,820
			000 tonnes	0	0	0	0	2,420
Total Oilseeds			000 tonnes	0	0	1,162	1,162	68,156

(cont...)

TABLE A.1: PRODUCTION IN THE WEST COAST STATES. 1982. - continued.

Crop	Source (1) Tbl.	Page	Units	WASH	OREG	CALIF	THREE	USA
III. CATTLE (live as of Jan 1, 1982)								
All Cattle & Calves	384	262	000's	1,580	1,800	5,000	8,380	115,604
Milk Cows	474	323	000's	207	97	940	1,244	11,012
Heifers	(Year 1983)		000's	79	42	425	546	4,532
Beef Cattle (2)				1,294	1,661	3,635	6,590	100,060
IV. HOGS	405	275	000's	51	90	1,660	1,801	53,935
V. POULTRY (expressed in liveweight)								
Chicken	512	361	000 lbs.	93,762	72,000	786,780	952,542	16,769,971
			000 tonnes	43	33	357	432	7,609
Turkey	524	367	000 lbs.	0	16,088	416,120	432,208	3,316,176
			000 tonnes	0	7	189	196	1,505
Total Poultry Meat				43	40	546	628	9,113
Layers (incl. Pullets)								
Hens & Pullet	527	369	000's	5,309	2,524	34,363	42,196	286,299
Egg Prod'n			millions	1,334	620	8,288	10,242	69,706
VI. TREE FRUITS (3)								
Apples	254	187	M. lbs.	2,615	150	480	3,245	8,115
			000 tonnes	1,186	68	218	1,472	3,682
Apricots	263	192	tons	2,700	0	111,000	113,700	113,900
			000 tonnes	2	0	101	103	103
Cherries	272	196						
Sweet			tons	66,000	35,000	11,400	112,400	155,700
			000 tonnes	60	32	10	102	141
Tart			M. lbs.	0	5	0	5	311
			000 tonnes	0	2	0	2	141

(cont...)

TABLE A.1: PRODUCTION IN THE WEST COAST STATES. 1982. - continued.

Crop	Source (1) Tbl.	Page	Units	WASH	OREG	CALIF	THREE	USA
Peaches	304	215						
Exc. Cal Clingst.			M. lbs.	25	13	415	453	1,192
			000 tonnes	11	6	188	206	541
California Clingstone			M. lbs.	0	0	1,102	1,102	1,102
			000 tonnes	0	0	500	500	500
Total			M. lbs.	25	13	1,517	1,555	2,294
			000 tonnes	11	6	688	706	1,041
Pears	310	218	tons	264,800	175,000	321,500	761,300	803,950
			000 tonnes	240	159	292	691	730
Prune & Plums	319	223	tons	14,600	38,000	0	52,600	76,100
			000 tonnes	13	34	0	48	69
Total Tree Fruit			000 tonnes	4,211	301	112,208	116,721	119,703
VII. BERRIES (4)								
Cranberries	290	208	cwt.	89,000	65,000	0	154,000	2,936,000
			000 tonnes	4	3	0	7	133
Strawberries	328	227	000's cwt.	186	580	6,272	7,038	8,779
			000 tonnes	8	26	284	319	398
Total Berries			000 tonnes	12	29	284	326	531
VIII. GRAPES	294	210	000's tons	169	0	6,076	6,245	6,554
			000 tonnes	153	0	5,514	5,667	5,948
IX. VEGETABLES	201	149	000's tons	802	921	11,464	13,186	21,460
			000 tonnes	728	835	10,403	11,966	19,473

Notes: (1) US Dept. of Agric. Agricultural Statistics 1984. except where noted.
(2) Beef Cattle = All Cattle & Calves - Milk Cows - Milk Breeding Stock
(3) Tree Fruits do not include Citrus Crops
(4) Berries only include Cranberries and Strawberries

Conversion Rates:

Wheat:	36.750 bu/tonne
Rye:	39.368
Corn:	39.368
Oats:	64.842
Barley:	45.930
Flax:	39.368
Soybn:	36.744

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TABLE A.2: VALUE OF PRODUCTION IN THE WEST COAST STATES.

Crop	Source (1) Table	Page	Units	WASH	OREG	CALIF	THREE	USA
I. GRAINS					($ 000 US)			
Wheat	10	8		561,076	255,270	290,062	1,106,408	9,813,015
Rye	21	17		0	302	0	302	55,004
Rice	32	23		0	0	238,389	238,389	1,246,608
Corn	44	34		72,000	18,720	146,718	237,438	22,039,409
Oats	54	41		3,478	10,519	7,471	21,468	883,167
Barley	60	46		110,184	34,410	108,016	252,610	1,143,209
Total Value of Grain				746,738	319,221	790,656	1,856,615	35,180,412
II. OILSEEDS								
Cottonseed	141	109	$/ton			90.50	90.50	77.00
			000 tons			1,280	1,280	4,744
			000 $ US	0	0	115,840	115,840	365,280
					($ 000 US)			
Flaxseed	151	117		0	0	0	0	53,341
Peanuts	163	123		0	0	0	0	862,686
Soybeans	173	129		0	0	0	0	12,462,779
Sunflowers	181	133		0	0	0	0	473,454
Total Value of Oilseeds				0	0	115,840	115,840	14,217,540
III. CATTLE					($ 000 US)			
All Cattle & Calves	389	262		734,700	720,000	2,800,000	4,254,700	47,966,517
Milk (& Cream)	487 (1983 hnbk.)	335		487,335	440,125	184,222	1,111,682	18,597,726
IV. HOGS	405	275		4,743	7,110	43,365	55,218	4,852,905
V. POULTRY								
Chicken	512	361		30,473	24,840	259,637	314,950	4,505,579
Turkey	524	367		0	6,435	145,642	152,077	1,261,311
Eggs	530	371		58,110	31,080	371,872	461,062	3,464,502

(cont...)

TABLE A.2: VALUE OF PRODUCTION IN THE WEST COAST STATES. - continued.

Crop	Source (1) Table	Page	Units	WASH	OREG	CALIF	THREE	USA
					($ 000 US)			
VI. TREE FRUITS (2)								
Apples	254	187	$/lb	0.097	0.100	0.112	0.099	0.100
			M. lbs.	2,615	150	480	3,245	8,115
			$ 000	253,655	15,000	53,760	322,415	811,500
Apricots	263	192	$/ton	531		318	323	323
			tons	2,700	0	111,000	113,700	113,900
			$ 000	1,434	0	35,298	36,732	36,790
Cherries	272	196						
Sweet			$/ton	746	617	1,347	767	694
			tons	66,000	35,000	11,400	112,400	155,700
			$ 000	49,236	21,595	15,356	86,187	108,056
Tart			$/lb		0.162		0.162	0.141
			M. lbs.	0	5	0	5	311
			$ 000	0	810	0	810	43,837
Peaches	304	215						
Exc. Cal Clingst.			$/lb	0.223	0.290	0.103	0.115	0.144
			M. lbs.	25	13	415	453	1,192
			$ 000	5,575	3,770	42,745	52,090	171,576
California Clingstone			$/lb			0.092	0.092	
			M. lbs.			1,102	1,102	1,102
			$ 000	0	0	101,384	101,384	0
Total Peaches			$ 000	5,575	3,770	144,129	153,474	171,576
Pears	310	218	$/ton	196	213	150	180	183
			tons	264,800	175,000	321,500	761,300	803,950
			$ 000	51,901	37,275	48,225	137,401	147,123
Prune & Plums	319	223	$/ton	300	185		217	252
			tons	14,600	38,000	0	52,600	76,100
			$ 000	4,380	7,030	0	11,410	19,177
Total Value of Tree Fruit			$ 000	366,181	85,480	296,768	748,428	1,338,058

(cont...)

TABLE A.2: VALUE OF PRODUCTION IN THE WEST COAST STATES. - continued.

Crop	Source (1) Table	Page	Units	WASH	OREG	CALIF	THREE	USA
					($ 000 US)			
VII. BERRIES (3)								
Cranberries	290	208	$/cwt.	47.10	47.10		47.10	46.70
			cwt.	89,000	65,000	0	154,000	2,936,000
			$ 000	4,192	3,062	0	7,253	137,111
Strawberries	328	227	$/cwt.	43.40	43.90	46.90	46.56	48.10
			000 cwt.	186	580	6,272	7,038	8,779
			$ 000	8,072	25,462	294,157	327,691	422,270
Total Berries			$ 000	12,264	28,524	294,157	334,945	559,381
VIII. GRAPES	294	210	$/ton	185		231	230	232
			000 tons	169	0	6,076	6,245	6,554
			$ 000	31,247	0	1,403,556	1,434,803	1,520,574
IX. VEGETABLES	202	151	$ 000	80,282	96,831	1,720,445	1,897,558	3,536,057

Notes: (1) US Dept. of Agric. Agricultural Statistics 1984. except where noted.
(2) Tree Fruits do not include Citrus Crops
(3) Berries only include Cranberries & Strawberries
All price data are seasonal averages.

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APPENDIX B

APPENDIX B

FEDERAL GOVERNMENT ASSISTANCE TO AGRICULTURE IN THE U.S.A.

This appendix contains a list of the programs of federal government assistance to agriculture in the U.S.A. and the three west coast states of the U.S.A. for U.S. fiscal periods which approximate the Canadian fiscal year 1982/3. This list derives from review of programs identified by McLaughlin (1984), the B.C. Ministry of Agriculture and Food, and by the Consultant.

Inclusions:

All the programs of federal expenditures identified by the above named persons as assistance to agriculture, except as detailed below, are included. These programs include all the programs of the U.S. Department of Agriculture (except those specified below), those programs of the Department of the Interior relavent to agriculture (Bureau of Land Management, Grazing Division; and Bureau of Reclamation), and the Internal Revenue Service.

Omissions

Some federal programs included in the budget of the the U.S. Department of Agriculture were considered for the purposes of this study to be only very indirectly related, or not related, to agriculture in the U.S.A. These programs, as detailed below, have been omitted from this study and the list of federal government assistance to agriculture in the U.S.A. which follows.

The programs of the U.S. Department of Agriculture (and the U.S. fiscal 1982/83 expenditures in thousands of U.S.dollars) identified but omitted from this study are: Food Safety and Inspection Service ($323,234), Human Nutrition Information Service ($5,766), Forest Service ($1,824,940), Foreign Assistance Programs ($991,987), and the Office of Transportation ($2,249). These omisions are consistant with omissions made in the analysis of government assistance to agriculture in Canada (Arcus Consluting Limited 1985).

Also omitted from inclusion in this report are U.S. federal government expenditures on navigable waterways used (in part) for the transportation of agricultural products. The Mississippi River system in the Midwest and the Snake and Columbia River systems in the West are the major waterway systems of relavence to this study. The omission of data for federal expenditures on these waterways is consistant with the omisssion of federal expenditure data on the St. Lawrence Seaway system in Canada, the major Canadian waterway used for agricultural products, in the Canadian report.

Modification

The major modification to the U.S. federal expenditure on agriculture data is the conversion of Food and Nutrition Service (FNS) expenditures by the U.S. Department of Agriculture from the actual amounts reported to a farm-gate estimate. The expenditures of the FNS are largely for food stamps, school lunches and related programs; i.e. the expenditures which create retail level expenditures on food. These retail level expenditures have been reduced to a farm-gate equivalent before being included in this report.

TABLE B.1: FEDERAL GOVERNMENT ASSISTANCE TO AGRICULTURE. U.S.A. 1982/3.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
I. ASSISTANCE PROVIDING IMMEDIATE (ANNUAL) BENEFITS TO FARMERS					
A. REVENUE ENHANCING					
1. Product Purchase/Compensation					
Public Law 480					
Titles I and III: Concessional Credit and Local Currency Sales	9	810,200			
Title II: Donations	9	397,700			
Extended Storage/Handling - Grain (ASCS)	6	963,847	567	6,124	20,131
Voluntary Diversion Programs Cotton & Feed Grains (ASCS)	6/7	705,443	564	1,241	2,914
Fed. Crop Insurance Corp. (FCIC)					
Administration & Operating Expense	8	131,300	4,900	600	1,600
Premium Subsidies on Gov't Sold Ins	8	73,200	2,741	268	809
Premium Subsidies thru Reinsured Cos	8	18,300	0	58	167
Deficit Coverage	5	229,100			
Milk Indemnity Programs (ASCS)	7	14	0	0	0
Disaster Programs - Cotton, Feed Grains, Rice & Wheat (ASCS)	7	181,933	856	52	41
Drought and Flood Relief	7	18	0	0	0
US Fish & Wildlife Service Animal Damage Control	**				
Food and Nutrition Service (incl. Food Stamps and School Lunch Programs)	4	5,316,630			
Total Product Purchase and Comp.		8,827,685	9,629	8,342	25,662
2. Stabilization Payments					
Deficiency Programs (ASCS)					
Feed Grains	7	528,699	3,619	1,350	7,414
Wheat	7	632,983	9,083	15,807	41,542
Cotton	7	683,350	86,513	0	0
Rice	7	155,816	23,698	0	0
Payment in Kind (PIK)	6/17	9,423,953	139,800	44,200	89,700
Dairy Support & Related Programs	2	2,621			
National Wool Act (ASCS)	7	46,042			
Commodity Credit Corporation					
Operating Expenses	6	333,706			
Net Interest Expense	6	1,522,856			
CCC Non-recourse Loan Settlement Costs (Loan Value - Commodity Value)	6	56,372			
Net Loss on Commodity Operations (Inventory Cost-Selling price)	6	1,989,000			
Total Stabilization Paym'ts		15,375,396	262,713	61,357	138,656

TABLE B.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
3. Market Support and Infrastructure					
Export Credit Sales Program-Defaults	6	57,090			
Export/Import Bank	**				
Foreign Military Sales	**				
Economic Intelligence	20	159,000			
Foreign Ag. Service	20	70,836			
Federal Grain Inspection Service	20	7,106			
Ag. Marketing Service	20	558,790			
Packers and Stockyards Admin.	20	8,217			
Ag. Coop Service	20	4,532			
Market Regulation					
Meat Import (Control) Act	**				
Milk & Milk Products Imp. (Cntrl) Act	**				
Sugar Import (Control) Act	**				
Hay and Cotton Trans. Prog.	**				
Total Market Support and Infrastructure:		865,571	0	0	0
Total Revenue Enhancing:		25,068,652	272,341	69,699	164,319
B. COST REDUCING					
4. Agricultural Credit					
Farmers' Home Administration					
Admin. Cost	11	356,600			
Interest Subsidy	15				
Ag. Credit Ins. Fund (Farmer Loans)		1,078,599			
Rural Housing Ins. Fund (House Loans)		1,492,641			
Rural Development Fund (Devel. Loans)		560,005			
Total Interest Subsidy		3,131,245			
Loan Defaults:					
Farmer Loans-					
Insured & Guarant'd Farm Owner Loans	11	207	6	0	0
Insured & Guarant'd Farm Oper Loans	11	3,275	62	178	36
Emergency Disaster Loans	11	2,387	411	140	0
Economic Emergency Loans	11	4,763	112	4	107
Soil & Water Loans	11	18	0	0	0
Recreation Loans	11	469	0	0	0
Resource Conser. & Develop Loans	11	225	0	0	0
Total Defaults - Farmer Loans		11,344	591	322	143

(cont...)

TABLE B.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Housing Loans-					
Lo & Mod. Inc. Housing Loans and Very Lo Inc. Housing Repair Loans	11	3,270	8	16	58
Rural Rental Housing Loans	11	178	0	0	0
Farm Labour Housing Loans	11	648	0	0	0
Rural Self-Help Housing Loans	11	0	0	0	0
Total Defaults - Housing Loans		4,096	8	16	58
Total Defaults		15,441	599	338	201
Grants:					
Very Lo Inc. Housing Repair Grants	11	12,500	207	70	78
Farm Labour Housing Grants	11	7,544	154	0	2,298
Mutual Self-Help Tech Asst. Grants	11	10,986	4,059	0	648
Compensation for Construction Defects	11	296	1	1	2
Rental Assist. Grants	11	123,744	5,900	2,729	2,950
Business & Industry Develop Grants	11	81,912	0	3,249	1,000
Water & Waste Disposal Grants	11	313,161	5,987	1,917	1,010
Total Grants		550,141	16,307	7,965	7,987
Total FHA- Adm, Int, Defaults & Grants		4,053,427	16,906	8,303	8,188
Farm Credit Administration					
Operating Expenses	5	17,356			
Total FCA		17,356			
Total Agricultural Credit		4,070,783	16,906	8,303	8,188
5. Tax Benefits					
Excise					
Fuel Tax Exemptions	**				
Income Tax: Farm Exemptions	18	1,590,000			
Inheritance	**				
Total Tax Benefits		1,590,000			
6. Other Farm Inputs					
Anim. & Plant Health Insp.Serv (APHIS)					
Animal Disease & Pest Control	14	183,769	2,957	558	833
Plant Disease & Pest Control	14	106,791	11,768	293	1,496
Total APHIS		290,560	14,725	851	2,330

(cont...)

TABLE B.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Environmental Protection Agency					
Exemption from EPA requirements:					
Certain Chemicals used in berry production in Washington State	**				
Energy Conservation Prog.	**				
Total Other Farm Inputs		290,560	14,725	851	2,330
Total Cost Reducing:		5,951,343	31,632	9,154	10,518
Total Immediate Assistance:		31,019,995	303,973	78,853	174,836
II. ASSISTANCE PROVIDING LONG TERM BENEFITS TO FARMERS					
7. Land and Farm Development					
Total Land and Farm Development		0	0	0	0
8. Rural Infrastructure					
Department of Agriculture:					
Agric. Conserv. Service-ASCS					
Operating Expense	7	372,733			
Agr. Conserv. Prog.	7	161,622	4,264	3,224	4,269
Forestry Incentive Program	7	11,799	109	456	329
Drought & Flood Conservation Prog	7	18	0	0	0
Regional Development Program	7	1	0	0	0
Emergency Feed Program	7	12,186	26	45	4
Emergency Conserv. Prog.	7	3,916	605	335	97
Appalachian Land Stab/Conser Prog	7	335	0	0	0
Water Bank Program	7	10,248	509	0	24
Rural Clean Water Program (ASCS)	7	3,548	0	653	0
Total ASCS		576,408	5,513	4,713	4,724
Soil Conservation Service					
Resource Appraisal & Program Developme	10	5,918	40	15	63
Inventory & Monitoring	10	19,403	414	219	248
Gr. Plains Conserv. Prog.	10	21,443	0	0	0
Watershed Planning	10	8,487	408	18	53
Watershed Operations	10	185,350	4,556	1,046	768
Emergency Watershed Operations	10	14,874	3,411	14	(363)
Flood Prevention Operations	10	27,134	1,159	0	0
Conservation Tech. Assist. Operations	10	250,958	8,116	4,333	5,565

(cont...)

TABLE B.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Regional Planning Commission	10	125	0	0	0
Rural Clean Water (SCS)	10	265	0	0	0
Rural Abandoned Mine Prog.	10	3,478	0	0	0
Resource Conserv. & Devel.	10	29,096	66	134	255
Total SCS (non-Research)		566,531	18,169	5,779	6,589
Rural Electrification Administ.					
Administration	20	27,282			
Rur. Elect. Loans & Guarant.	**				
Rur. Tele. Loans & Guarant.	**				
Rur. Comm. Development Fund Outlays	20	6,972			
Total Rural Electrical		34,254	0	0	0
Office of Rural Development Policy	20	2,349			
Department of the Interior					
Bureau of Land Management	20				
Range Improvements		10,516			
Total Bureau of Land Management		10,516			
Bureau of Reclamation	19				
Columbia River Basin Development					
Ag. Allocated Irrigation cost					
Interest Relief		63,089			63,089
Capital Repayment Relief		9,060			9,060
Orville Tonasket Project					
Interest Relief		7,046			7,046
Capital Repayment Relief		1,084			1,084
California Central Valley Water Project					
Ag. Allocated Irrigation cost					
Interest Relief		97,463	97,463		
Total Bureau of Reclamation		177,742	97,463	0	80,279
Total Rural Infrastructure		1,367,799	121,144	10,492	91,592

(cont...)

TABLE B.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
9. Research and Extension					
Dept. of Agriculture					
Agric. Research Service					
Animal Productivity	12	87,218	626	0	1,445
Plant Productivity	12	181,109	11,320	2,578	5,921
Soil & Water Conservation	12	63,518	4,844	942	966
Commodity Conversion	12	88,260	12,005	0	513
Human Nutrition	12	27,632	4,530	0	0
Energy Retrofit	12	2,588			
Contingency Fund	12	1,000			
Repair & Maintenance of Facilities	12	8,504			
Allottment to Other Agencies	12	393			
Total ARS		460,222	33,325	3,520	8,845
Cooperative State Research Service					
Grants to State Ag. Experiment Station	13	221,200	9	4	5
Tennessee Valley Authority					
Nat'l Fertilizer Devel	**				
Tenn. Valley Region -					
Valley Agric. Res. Devel	**				
Soil Conservation Service					
Soil Survey	10	51,347	1,708	846	687
Plant Materials Centres	10	3,828	201	135	203
River Basins Surveys/Invest.	10	12,356	443	62	198
Snow Survey/Water Supply For.	10	3,795	4	337	156
Total SCS-Research		71,327	2,356	1,380	1,244
Cooperative Extension Service	16	315,234	9,695	3,595	4,180
Total Research and Extension		1,067,982	45,385	8,499	14,274
10. Other:					
U.S. Dept. of Agriculture					
Office of the Secretary	20	4,920			
Departmental Administration	20	63,137			
Office of Government and Public Affairs	20	6,109			

(cont...)

TABLE B.1: Concluded.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Office of the Inspector-General	20	41,011			
Office of General Counsel	20	14,141			
National Agricultural Library	20	6,305			
Statistical Reporting Service	20	49,407			
Economic Research Service	20	36,836			
World Ag. Outlook Board	20	1,299			
Office of Int'l Coop. and Development	20	12,603			
Total Other		235,768	0	0	0
Total Long Term Assistance:		2,671,549	166,529	18,991	105,866
III. TOTAL FEDERAL:		33,691,544	470,502	97,844	280,702

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TABLE B.1: Sources

1 USDA. ERS. Econ. Indicators of the Farm Sector, State Income & Balance Sheet Statistics, 1982 (Table 18)

2 USDA. ERS. Dairy. Table 8.

3 USDA. ASCS. 1984.

4 USDA. ERS. National Food Review. NFR-28. 1985. p. 23.
adjusted for farmer's share of retail expenditure, 33%, as reported by BCMAF, Executive Director, Policy and Planning.

5 BCMAF. Memo from Erin Newton to D.M. Matviw. June 19, 1985.

6 USDA Pers. Comm 7/19/85
Joe Brian, Budget Analyst
ASCS-USDA
Washington, D.C. (202-382-0178)

7 USDA Pers. Comm. 7/17/85:
Jim Jamison, Freedom of Information Officer,
Office of Information, ASCS-USDA
PO Box 2415, Washington, D.C. (202-447-5875)
NOTE: all figs reflect expenditures in calandar year 1982

8 USDA Pers. Comm. 7/17/85, 7/19/85
Eric Edgington, Public Affairs Division
Mary Ellis Nooralian, Freedom of Information Officer
FCIC-USDA, Washington, D.C.
(202-382-9826)

9 USDA Pers. Comm. 7/18/85:
Paul Kiendl, Program Analysis Division
Foreign Agricultural Service, Export Credits
USDA, 14th Street & Independence Avenue S.W.
(202-447-3573)

10 USDA Pers. Comm. 7/18/85:
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(202-382-8164)

11 USDA Pers. Comm. 7/18/85
John Trost, Budget Analyst
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(202-382-9680)

(cont...)

TABLE B.1 - Sources, continued.

12 USDA Pers. Comm. 7/19/85:
Marnie Braden, Head
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13 Betty Lou Gilliland
Budget Analyst
CSRS-USDA
Washington, D.C.
(202-447-5787)
(Excludes State Agricultural Experiment Station Grants
by other agencies, e.g. NSF, NIH, etc.)

14 USDA Pers. Comm. 7/19/85
Tom Morran,
Budget Analyst,
USDA-APHIS
Room 240, Federal Building
#6505 Belcrest Road
Hyattsville, Md. 20787
(301-436-8635)

15 USDA Pers. Comm. 7/19/85 (Morran)
The calculation of interest costs was derived by subtracting the loan
loan default amounts for farmer and housing loans from the
respective categories of the "Reimbursement for Loss" figures
provided by Morran. The "Reimbursement for Loss" figures
represent total losses incurred under the farmer, housing and community
development loan programs for interest subsidies and defaults
for fiscal year end 1983, but do not appear as a budget item until 1985.
By deducting the default amounts, these figures then represent interest subsidy
amounts for loans and loan defaults.

(cont...)

TABLE B.1 - Sources, continued.

16 USDA Pers. Comm. 7/19/86:
Danilo Domingo, Budget Analyst
Cooperative Extension Service, USDA, Washington, D.C.
(202-447-4436)

17 USDA Pers. Comm. 7/19/85:
Roland Olson
Freedom of Information Officer
ASCS-USDA, Washington, D.C.
(202-447-8221)

18 Hanson. 1985.

19 Appendix E

20 U.S. Executive Office of the President. Office Management & Budget. Budget of the United States Government. 1985. Washington, D.C. Feb 1, 1984. 1983 Actual Outlays (various tables). Depts. of Agriculture, Interior.

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APPENDIX C

CALIFORNIA

TABLE C.1: STATE ASSISTANCE TO AGRICULTURE - CALIFORNIA. 1982-83

I. ASSISTANCE PROVIDING IMMEDIATE ANNUAL BENEFITS	Source	Cost $US 000's	Cost $CAN 000's
Revenue-Enhancing (Output Assistance)			
1. Product Compensation			
Total Product Compensation		0	0
2. Stabilization			
Total Stabilization		0	0
3. Market Support and Infrastructure			
Agric. Mktng Services	GB84	8,451	10,395
Food & Agr. Standards & Inspection	GB84	6,389	7,858
Measurement Standards	GB84	3,531	4,343
Cal. Exposition and State Fair	GB84	9,620	11,833
Financial & Admin. Assist. to Local Fairs	GB84	15,313	18,835
Total Market Support and Infrastructure		43,304	53,264
Total Revenue Enhancing		43,304	53,264
Cost-Reducing (Input Assistance)			
4. Agricultural Credit			
Total Agricultural Credit		0	0
5. Tax Benefits			
Property Tax Exemptions			
Land Conservation Act 1965			
State Reimbursements to Local Gov'ts for Pr. Taxes foregone	CSDF	13,475	16,574
Retail Sales and Use Tax: Exemptions:			
For Ag. Feed Seed and Fertilizer	CSDF	125,000	153,750
Fuel Tax: Non-Highway Use:			
Farmer Portion	*****		
Total Tax Benefits		138,475	170,324
6. Other Farm Inputs			
Pesticide Regulatory Program	GB84	18,311	22,523
Plant Pest & Disease Prevention	GB84	31,756	39,060
Animal Pest & Disease Prevention/Inspectio	GB84	9,595	11,802
Ag. Labour Relations Board	GB84	8,320	10,234
Mediterranean Fruit Fly	GB83	1,909	2,348
Total Other Farm Inputs		69,891	85,966
Total Cost Reducing		208,366	256,290

(cont...)

TABLE C.1: Continued. 1982-83

	Source	Cost $US 000's	Cost $CAN 000's
TOTAL ASSISTANCE PROVIDING IMMEDIATE BENEFITS		251,670	309,554
II. ASSISTANCE PROVIDING LONG TERM BENEFITS			
7. Land and Farm Development (on farm)			
Water	CDWR	0	0
Irrigation	CDWR	0	0
Total Land & Farm Development		0	0
8. Rural Infrastructre			
Dept. of Water Resources			
Ag. Water Supplies	CDWR	0	0
Irrigation	CDWR	0	0
Total Rural Infrastructure		0	0
9. Research & Extension			
State Grants: Ag. Extn.	UCAL	24,961	30,702
State Grants: Ag. Research	UCAL	59,540	73,234
Total Research & Extension		84,501	103,936
TOTAL ASSISTANCE PROVIDING LONG TERM BENEFITS		84,501	103,936
III. OTHER			
Executive Mgmt. and Admin Services			
Funded Programs	GB84	7,396	9,097
Special Programs	GB84	(5,517)	(6,786)
General Agric. Paym't & Emergency Funds		3,266	4,017
TOTAL OTHER ASSISTANCE		5,145	6,328
IV. TOTAL STATE ASSISTANCE TO AGRICULTURE		341,316	419,819

Exchange Rate: $ U.S. 1.00 = 1.23 $ CAN

TABLE C.1: Sources:

GB84 - Governor's Budget. State of California. 1984/5.
Department of Agriculture and Food.
Actual Expenditures 1982/83

GB83 - Governor's Budget. State of California. Dept. of Agriculture.
1983/4.

UCAL - Warren E. Schoonover
Director of Administrative Services
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CSDF - California Department of Finance
Sacramento, CA.
Financial Research Unit
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OREGON

TABLE C.2: STATE ASSISTANCE TO AGRICULTURE - OREGON. 1982-83.

I. ASSISTANCE PROVIDING IMMEDIATE ANNUAL BENEFITS	Source	Cost $US 000's	Cost $CAN 000's
Revenue-Enhancing (Output Assistance)			
1. Product Compensation			
Total Product Compensation		0	0
2. Stabilization			
Total Stabilization		0	0
3. Market Support and Infrastructure			
Commodity Inspections	ODA	66	81
Food and Dairy	ODA	793	975
Weights and Measures	ODA	135	166
Ag. Dev. and Marketing	ODA	405	498
Total Market Support and Infrastructure		1,399	1,721
Total Revenue Enhancing		1,399	1,721
Cost-Reducing (Input Assistance)			
4. Agricultural Credit			
Oregon Dept. of Veteran's Affairs			
Farm Loans Int. Subsidy	ODVA	20,384	25,072
Total Agricultural Credit		20,384	25,072
5. Tax Benefits			
Personal Income Tax Exemptions			
Same items as in Federal Return	OLS	*****	
Corporate Excise and			
Income Tax Exemptions			
Same items as in Federal Return	OLS	*****	
Gift and Inheritance Tax Exemptions	OLS	*****	
Property Taxes:	OLS		
Farm Land Special Assessm't Proceedure		7,500	9,225
Fm. Machinery and Equip't Exemption		4,000	4,920
Poultry Animals and Bees Exemption		3,000	3,690
Weight/Mile Tax: Fm. Vehicle Exemption	ODT	2,200	2,706
Total Tax Benefits		16,700	20,541
6. Other Farm Inputs			
Plant Testing and Disease	ODA	836	1,028
Pesticides Feed and Fertilizer	ODA	11	13
Weed Control	ODA	258	317
Livestock	ODA	49	60
Animal Health	ODA	579	712
Predator control	ODA	152	187
Lab services	ODA	357	439
Total Other Farm Inputs		2,241	2,757

(cont...)

TABLE C.2: Continued.

	Source	$US 000's	$CAN 000's
Total Cost Reducing		39,325	48,370
TOTAL ASSISTANCE PROVIDING IMMEDIATE BENEFITS		40,724	50,091
II. ASSISTANCE PROVIDING LONG TERM BENEFITS			
7. Land and Farm Development			
Soils and Water Conservation	ODA	104	128
Total Land & Farm Development		104	128
8. Rural Infrastructure			
Oregon Dept. of Water Resources			
Water Development (Irrig. and Drainage)			
Loan Program Low Interest Subsidy	ODWR	981	1,207
Total Rural Infrastructure		981	1,207
9. Research & Extension			
Ag. Expt. Station (State funding)	ODHE	10,530	12,951
Ag. Co-op Extension Serv. (State funding)	ODHE	6,478	7,968
Western Rural Dev. Center			
Cons. Credit Counselling Serv.	*****		
State Mental Health	*****		
Small Business dev.	*****		
Employment Programs	*****		
Total Research & Extension		17,007	20,919
TOTAL ASSISTANCE PROVIDING LONG TERM BENEFITS		18,092	22,254
III. OTHER			
Administration	ODA	502	617
IV. TOTAL STATE ASSISTANCE TO AGRICULTURE		59,319	72,962

Exchange Rate: $US 1.00 = 1.23 $CAN

TABLE C.2: Sources:

ODA - Oregon Dept. of Agriculture. Budget Office. Salem, Oregon.
Pers. Comm. July 19 and Sept. 18, 1985.
Pat Dery, Budget Officer. (503) 378-5867

ODHE - Oregon Dept. of Higher Education. 1982-83 Operating Budget.
Estim. Source and Application of Funds:
-Co-operative Extension Service, and
-Agricultural Experiment Station
as provided by
The Office of Ag. Fiscal & Personnel Services
Oregon State University
Corvallis, OR 97331

OLS - Oregon Legislature Staff
Economics Group
Jim Schrizinger, Economist
Rick Petersen, Economist

ODVA - Derived from ODVA estimates of loan balances outstanding to farmer veterans and ODFA Interest rates in 1982/3.

ODT - Oregon Dept. of Transportation. Salem.
John Merrill
(503) 378-4083

ODWR - Oregon Dept. of Water Resources. Salem, OR.
Water Development Program.
Bud Bastell
(503) 378-8131

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WASHINGTON

(cont...)

TABLE C.3: STATE ASSISTANCE TO AGRICULTURE - WASHINGTON. 1982-83

I. ASSISTANCE PROVIDING IMMEDIATE ANNUAL BENEFITS	Source	Cost $US 000's	Cost $CAN 000's
Revenue-Enhancing (Output Assistance)			
1. Product Compensation			
Total Product Compensation		0	0
2. Stabilization			
Total Stabilization		0	0
3. Market Support and Infrastructure			
Dairy and Food Program	WSDA	1,199	1,475
Agricultural (Market) Development	WSDA	353	434
Commodity Inspections - General Fund	WSDA	32	39
Commod. Inspect. - Governors Emerg'cy Fund	WSGB	12	15
Total Market Support and Infrastructure		1,596	1,963
Total Revenue Enhancing		1,596	1,963
Cost-Reducing (Input Assistance)			
4. Agricultural Credit			
Total Agricultural Credit		0	0
5. Tax Benefits			
Property Tax Exemptions			
Inventories			
Growing Crops	WSDR	6,739	8,289
Stored Agricultural Crops	WSDR	519	638
Ag. Products Inv. Phaseout	WSDR	1,393	1,713
Nursery Stock	WSDR	328	403
Hops in Transit	WSDR	55	68
Farm Land Assessm't on Productive Capacity - Open Space Act	WSDR	13,501	16,606
Business & Occup. Tax Exemption			
Ag. and Poultry Producers	WSDR	18,630	22,915
Ag. Fairs	WSDR	107	132
Processors - Crops	WSDR	6,217	7,647
- Meat	WSDR	3,802	4,676
Int. on Loans to Aquatic and Ag. Producers	WSDR	1,695	2,084
Public Utility Taxes			
Irrigation Water	WSDR	690	849
Non-profit Water Associations	WSDR	438	539
Sales and Use Tax Exemption			
Agricultural Products	WSDR	45,966	56,539
Liquid Fuel Tax - Non-Highway Use refund	WSDR	2,700	3,321
Total Tax Benefits		102,779	126,418

(cont...)

TABLE C.3: Continued.

	Source	$US 000's	$CAN 000's
6. Other Farm Inputs			
Special Electricity Rates for Irrig.	WSDA	0	0
Livestock Services	WSDA	723	889
Ag. Chemicals and Plant Services - General	WSDA	989	1,216
Chem. and Plants - Governor's Emergency Fund	WSGB	15	18
Total Other Farm Inputs		1,727	2,124
Total Cost Reducing		104,506	128,543
TOTAL ASSISTANCE PROVIDING IMMEDIATE BENEFITS		106,102	130,506
II. ASSISTANCE PROVIDING LONG TERM BENEFITS			
7. Land and Farm Development			
State has no mandate for works on private lands (farms)			
Total Land & Farm Development		0	0
8. Rural Infrastructure (Off Farm)			
Ag. Water Supplies:			
State Dept. of Ecology:			
Current Account Grants	WSDE	3,300	4,059
Ref. 38 and 27 Alloc. Grants	WSDE	2,138	2,629
Total Rural Infrastructure		5,438	6,688
9. Research & Extension			
Ag. Co-op. Extension Service (State funding)	WSU1	7,300	8,979
Ag. Expt. Station (state funding)	WSU2	12,075	14,852
Total Research & Extension		19,375	23,831
TOTAL ASSISTANCE PROVIDING LONG TERM BENEFITS		24,813	30,520
III. OTHER			
Administration - General Fund	WSDA	681	838
Administration - Governor's Emergency Fund	WSGB	11	14
TOTAL OTHER		692	851
IV. TOTAL STATE ASSISTANCE TO AGRICULTURE		131,607	161,876

Exchange Rate: $ US 1.00 = 1.23 $ CAN

TABLE C.3: Sources:

WSDA - Washington State Dept. of Agriculture.
Olympia, WA.
Budget Office
LEAP Report. 1982/3.
Richard Cissell. (206) 753-5056

WSU - Washington State University
Pullman, WA 99164

1. Wayne Bath
Co-operative Extension Service

2. George W. Bruehl, Assistant Director
Agricultural Research Centre

WSGB - State of Washington Governor's Budget 1985-1987 Biennium

WSDE - Washington State Dept. of Ecology
Richard Szymarek, Office of Water Programs
Olympia, WA 98504 (206) 459 6122

WSDR - Washington State Dept. of Revenue
Don Smallwood, Director of Research
Olympia, WA (206) 753 5542

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APPENDIX D

TABLE D.1: FEDERAL GOVERNMENT ASSISTANCE TO AGRICULTURE. U.S.A. 1982/3.
ALL FEDERAL EXPENDITURES ALLOCATED.

	Source	USA	California	Oregon	Washington
ALLOTMENT FACTOR					
Ratio of State Gross Value of Farm Production to Federal Gross Value of Farm Production		1.00	0.092	0.013	0.021
			(U.S. $ thousands)		
I. ASSISTANCE PROVIDING IMMEDIATE (ANNUAL) BENEFITS TO FARMERS					
A. REVENUE ENHANCING					
1. Product Purchase/Compensation					
Public Law 480					
Titles I and III: Concessional Credit and Local Currency Sales	9	810,200	74,892	10,376	17,201
Title II: Donations	9	397,700	36,762	5,093	8,443
Extended Storage/Handling - Grain (ASCS)	6	963,847	567	6,124	20,131
Voluntary Diversion Programs					
Cotton & Feed Grains (ASCS)	6/7	705,443	564	1,241	2,914
Fed. Crop Insurance Corp. (FCIC)					
Administration & Operating Expense	8	131,300	4,900	600	1,600
Premium Subsidies on Gov't Sold Ins	8	73,200	2,741	268	809
Premium Subsidies thru Reinsured Cos	8	18,300	0	58	167
Deficit Coverage	5	229,100	21,177	2,934	4,864
Milk Indemnity Programs (ASCS)	7	14	0	0	0
Disaster Programs - Cotton, Feed Grains, Rice & Wheat (ASCS)	7	181,933	856	52	41
Drought and Flood Relief	7	18	0	0	0
US Fish & Wildlife Service					
Animal Damage Control	**				
Food and Nutrition Service (incl. Food Stamps and School Lunch Programs)	4	5,316,630	491,449	68,086	112,874
Total Product Purchase and Comp.		8,827,685	633,909	94,831	169,044
2. Stabilization Payments					
Deficiency Programs (ASCS)					
Feed Grains	7	528,699	3,619	1,350	7,414
Wheat	7	632,983	9,083	15,807	41,542
Cotton	7	683,350	86,513	0	0
Rice	7	155,816	23,698	0	0
Payment in Kind (PIK)	6/17	9,423,953	139,800	44,200	89,700
Dairy Support & Related Programs	2	2,621	242	34	56
National Wool Act (ASCS)	7	46,042	4,256	590	977
Commodity Credit Corporation					
Operating Expenses	6	333,706	30,847	4,274	7,085
Net Interest Expense	6	1,522,856	140,767	19,502	32,331
CCC Non-recourse Loan Settlement Costs (Loan Value - Commodity Value)	6	56,372	5,211	722	1,197
Net Loss on Commodity Operations (Inventory Cost-Selling price)	6	1,989,000	183,856	25,472	42,227
Total Stabilization Pay'ts		15,375,396	627,891	111,949	222,529

(cont...)

TABLE D.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
3. Market Support and Infrastructure					
Export Credit Sales Program-Defaults	6	57,090	5,277	731	1,212
Export/Import Bank	**				
Foreign Military Sales	**				
Economic Intelligence	20	159,000	14,697	2,036	3,376
Foriegn Ag. Service	20	70,836	6,548	907	1,504
Federal Grain Inspection Service	20	7,106	657	91	151
Ag. Marketing Service	20	558,790	51,652	7,156	11,863
Packers and Stockyards Admin.	20	8,217	760	105	174
Ag. Coop Service	20	4,532	419	58	96
Market Regulation					
Meat Import (Control) Act	**				
Milk & Milk Products Imp. (Cntrl) Act	**				
Sugar Import (Control) Act	**				
Hay and Cotton Trans. Prog.	**				
Total Market Support and Infrastructure:		865,571	80,010	11,085	18,376
Total Revenue Enhancing:		25,068,652	1,341,810	217,865	409,949
B. COST REDUCING					
4. Agricultural Credit					
Farmers' Home Administration					
Admin. Cost	11	356,600	32,963	4,567	7,571
Interest Subsidy	15				
Ag. Credit Ins. Fund (Farmer Loans)		1,078,599	99,702	13,813	22,899
Rural Housing Ins. Fund (House Loans)		1,492,641	137,974	19,115	31,689
Rural Development Fund (Devel. Loans)		560,005	51,765	7,172	11,889
Total Interest Subsidy		3,131,245	289,441	40,100	66,477
Loan Defaults:					
Farmer Loans-					
Insured & Guarant'd Farm Owner Loans	11	207	6	0	0
Insured & Guarant'd Farm Oper Loans	11	3,275	62	178	36
Emergency Disaster Loans	11	2,387	411	140	0
Economic Emergency Loans	11	4,763	112	4	107
Soil & Water Loans	11	18	0	0	0
Recreation Loans	11	469	0	0	0
Resource Conser. & Develop Loans	11	225	0	0	0
Total Defaults - Farmer Loans		11,344	591	322	143

(cont...)

TABLE D.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Housing Loans-					
Lo & Mod. Inc. Housing Loans and Very Lo Inc. Housing Repair Loans	11	3,270	8	16	58
Rural Rental Housing Loans	11	178	0	0	0
Farm Labour Housing Loans	11	648	0	0	0
Rural Self-Help Housing Loans	11	0	0	0	0
Total Defaults - Housing Loans		4,096	8	16	58
Total Defaults		15,441	599	338	201
Grants:					
Very Lo Inc. Housing Repair Grants	11	12,500	207	70	78
Farm Labour Housing Grants	11	7,544	154	0	2,298
Mutual Self-Help Tech Asst. Grants	11	10,986	4,059	0	648
Compensation for Construction Defects	11	296	1	1	2
Rental Assist. Grants	11	123,744	5,900	2,729	2,950
Business & Industry Develop Grants	11	81,912	0	3,249	1,000
Water & Waste Disposal Grants	11	313,161	5,987	1,917	1,010
Total Grants		550,141	16,307	7,965	7,987
Total FHA- Adm, Int, Defaults & Grants		4,053,427	339,310	52,970	82,236
Farm Credit Administration					
Operating Expenses	5	17,356	1,604	222	368
Total FCA		17,356	1,604	222	368
Total Agricultural Credit		4,070,783	340,914	53,192	82,604
5. Tax Benefits					
Excise					
Fuel Tax Exemptions	**				
Income Tax: Farm Exemptions	18	1,590,000	146,974	20,362	33,756
Inheritance	**				
Total Tax Benefits		1,590,000	146,974	20,362	33,756
6. Other Farm Inputs					
Anim. & Plant Health Insp.Serv (APHIS)					
Animal Disease & Pest Control	14	183,769	2,957	558	833
Plant Disease & Pest Control	14	106,791	11,768	293	1,496
Total APHIS		290,560	14,725	851	2,330

(cont...)

TABLE D.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Environmental Protection Agency					
Exemption from EPA requirements:					
Certain Chemicals used in berry production in Washington State	**				
Energy Conservation Prog.	**				
Total Other Farm Inputs		290,560	14,725	851	2,330
Total Cost Reducing:		5,951,343	502,613	74,404	118,690
Total Immediate Assistance:		31,019,995	1,844,423	292,269	528,639
II. ASSISTANCE PROVIDING LONG TERM BENEFITS TO FARMERS					
7. Land and Farm Development					
Total Land and Farm Development		0	0	0	0
8. Rural Infrastructure					
Department of Agriculture:					
Agric. Conserv. Service-ASCS					
Operating Expense	7	372,733	34,454	4,773	7,913
Agr. Conserv. Prog.	7	161,622	4,264	3,224	4,269
Forestry Incentive Program	7	11,799	109	456	329
Drought & Flood Conservation Prog	7	18	0	0	0
Regional Development Program	7	1	0	0	0
Emergency Feed Program	7	12,186	26	45	4
Emergency Conserv. Prog.	7	3,916	605	335	97
Appalachian Land Stab/Conser Prog	7	335	0	0	0
Water Bank Program	7	10,248	509	0	24
Rural Clean Water Program (ASCS)	7	3,548	0	653	0
Total ASCS		576,408	39,967	9,486	12,637
Soil Conservation Service					
Resource Appraisal & Program Developme	10	5,918	40	15	63
Inventory & Monitoring	10	19,403	414	219	248
Gr. Plains Conserv. Prog.	10	21,443	0	0	0
Watershed Planning	10	8,487	408	18	53
Watershed Operations	10	185,350	4,556	1,046	768
Emergency Watershed Operations	10	14,874	3,411	14	(363)
Flood Prevention Operations	10	27,134	1,159	0	0
Conservation Tech. Assist. Operations	10	250,958	8,116	4,333	5,565

(cont...)

TABLE D.1: Continued.

	Source	USA	California	Oregon	Washington
			(U.S. $ thousands)		
Regional Planning Commission	10	125	0	0	0
Rural Clean Water (SCS)	10	265	0	0	0
Rural Abandoned Mine Prog.	10	3,478	0	0	0
Resource Conserv. & Devel.	10	29,096	66	134	255
Total SCS (non-Research)		566,531	18,169	5,779	6,589
Rural Electrification Administ.					
Administration	20	27,282	2,522	349	579
Rur. Elect. Loans & Guarant.	**				
Rur. Tele. Loans & Guarant.	**				
Rur. Comm. Development Fund Outlays	20	6,972	644	89	148
Total Rural Electrical		34,254	3,166	439	727
Office of Rural Development Policy	20	2,349	217	30	50
Department of the Interior					
Bureau of Land Management	20				
Range Improvements		10,516	972	135	223
Total Bureau of Land Management		10,516	972	135	223
Bureau of Reclamation	19				
Columbia River Basin Development					
Ag. Allocated Irrigation cost					
Interest Relief		63,089			63,089
Capital Repayment Relief		9,060			9,060
Orville Tonasket Project					
Interest Relief		7,046			7,046
Capital Repayment Relief		1,084			1,084
California Central Valley Water Project					
Ag. Allocated Irrigation cost					
Interest Relief		97,463	97,463		
Total Bureau of Reclamation		177,742	97,463	0	80,279
Total Rural Infrastructure		1,367,799	159,954	15,869	100,505

(cont...)

TABLE D.1: Continued.

	Source	USA	California	Oregon	Washington
9. Research and Extension			(U.S. $ thousands)		
Dept. of Agriculture					
Agric. Research Service					
Animal Productivity	12	87,218	626	0	1,445
Plant Productivity	12	181,109	11,320	2,578	5,921
Soil & Water Conservation	12	63,518	4,844	942	966
Commodity Conversion	12	88,260	12,005	0	513
Human Nutrition	12	27,632	4,530	0	0
Energy Retrofit	12	2,588	239	33	55
Contingency Fund	12	1,000	92	13	21
Repair & Maintenance of Facilities	12	8,504	786	109	181
Allottment to Other Agencies	12	393	36	5	8
Total ARS		460,222	34,479	3,680	9,110
Cooperative State Research Service					
Grants to State Ag. Experiment Station	13	221,200	9	4	5
Tennessee Valley Authority					
Nat'l Fertilizer Devel	**				
Tenn. Valley Region -					
Valley Agric. Res. Devel	**				
Soil Conservation Service					
Soil Survey	10	51,347	1,708	846	687
Plant Materials Centres	10	3,828	201	135	203
River Basins Surveys/Invest.	10	12,356	443	62	198
Snow Survey/Water Supply For.	10	3,795	4	337	156
Total SCS-Research		71,327	2,356	1,380	1,244
Cooperative Extension Service	16	315,234	9,695	3,595	4,180
Total Research and Extension		1,067,982	46,539	8,659	14,539
10. Other					
US Dept. of Agriculture					
Office of the Secretary	20	4,920	455	63	104
Departmental Administration	20	63,137	5,836	809	1,340
Office of Government and Public Affairs	20	6,109	565	78	130

(cont...)

TABLE D.1: Concluded.

	Source	USA	California	Oregon	Washington
10. Other Continued..			(U.S. $ thousands)		
Office of the Inspector-General	20	41,011	3,791	525	871
Office of General Counsel	20	14,141	1,307	181	300
National Agricultural Library	20	6,305	583	81	134
Statistical Reporting Service	20	49,407	4,567	633	1,049
Economic Research Service	20	36,836	3,405	472	782
World Ag. Outlook Board	20	1,299	120	17	28
Office of Int'l Coop. and Development	20	12,603	1,165	161	268
Total Other		235,768	21,794	3,019	5,005
Total Long Term Assistance:		2,671,549	228,286	27,547	120,050
IV. TOTAL FEDERAL:		33,691,544	2,072,709	319,816	648,689

** Not available

Basis: See script Chapter 7.

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APPENDIX E

Table E.1: Calculation of Assistance via Interest and Principal Relief on BR Water Project Capital Costs Allocated to Irrigation

State	Cal	Wash	Wash
Project	Central Valley Project (1)	Columbia River Basin (2)	Orville Tonasket Project (2)
	($ US millions)		
Projected Final Total Costs	3,600	4,229	
Allocation of final total Costs to Irrigation	2,400	3,167	
Irrigation Share	66.7%	74.9%	
Actual Costs through Fiscal 1982/3 (a)	1,800	772	
Allocated to Irrigation (3,2)	913	604	66
Less Amount Repaid	n.s.	13	0
Balance outstanding	913	591	66
INTEREST ASSISTANCE			
Federal Funds rate (b)	10.68%	10.68%	10.68%
Estimated value of government assistance via interest relief in fiscal 1982/3	($US 000's) 97,463	63,089	7,046
PRINCIPAL ASSISTANCE	($ US millions)		
Principal Repayable by:			
Irrigators	913	151	12
Other Project Users (Equals Subsidy of Principal to Irrigators)	0	453	54
	($US 000's)		
Per year (c)	0	9,060	1,084

a. Data reported in 1978. Actual 1982/3 may be larger
b. Simple Ave. of 1982 and 1983 as reported in USDC 1984A. p.8
c. Assumes a 50 year repayment period

Sources:

1 USDI. Bureau of Reclamation.
Engineering and Research Centre
Denver, CO
Economics Group
Ray Schluntz (303) 236-8388

2 USDI. Bureau of Reclamation.
Pacific Northwest Region
Boise, Idaho
Martin Fabricius
(208) 334-1162

3 USDI. Bureau of Reclamation.
Mid-Pacific Region
Sacramento, CA
Adrian Hutchens
(916) 978-5030

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